STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 152835

TO: Ralph J Gitomer Location: 3d65/3e71 Art Unit: 1651 Thursday, May 26, 2005 Case Serial Number: 09/590884	From: Noble Jarrell Location: Biotech-Chem Library Rem 1B71 Phone: 272-2556 Noble.jarrell@uspto.gov

Search Notes

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=> d his full

     (FILE 'HOME' ENTERED AT 07:49:20 ON 26 MAY 2005)

     FILE 'HCAPLUS' ENTERED AT 07:49:25 ON 26 MAY 2005
                E HAWKINS E/AU
L1           77 SEA ABB=ON  PLU=ON  ("HAWKINS E"/AU OR "HAWKINS E A"/AU OR
                "HAWKINS E C"/AU OR "HAWKINS E D"/AU OR "HAWKINS E F"/AU OR
                "HAWKINS E G"/AU OR "HAWKINS E G E"/AU OR "HAWKINS E GREGORY"/A
                U OR "HAWKINS E L"/AU OR "HAWKINS E R"/AU OR "HAWKINS E
                ROSEMARIE"/AU OR "HAWKINS E Y"/AU)
                E HAWKINS ERIKA/AU
L2            8 SEA ABB=ON  PLU=ON  ("HAWKINS ERIKA"/AU OR "HAWKINS ERIKA
                M"/AU)
                E HAWKINS ERICA/AU
                E CENTANNI J/AU
L3           10 SEA ABB=ON  PLU=ON  ("CENTANNI J"/AU OR "CENTANNI JOHN"/AU OR
                "CENTANNI JOHN M"/AU)
                E SANKBEIL J/AU
L4            3 SEA ABB=ON  PLU=ON  ("SANKBEIL JACQUELINE"/AU OR "SANKBEIL
                JACQUI"/AU)
                E WOOD K/AU
L5           84 SEA ABB=ON  PLU=ON  ("WOOD K"/AU OR "WOOD K V"/AU)
                E WWOD KEITH/AU
                E WOOD KEITH/AU
L6           76 SEA ABB=ON  PLU=ON  ("WOOD KEITH"/AU OR "WOOD KEITH V"/AU OR
                "WOOD KEITH VERNON"/AU)
L7          256 SEA ABB=ON  PLU=ON  PROMEGA/CS,PA
                E LUMINESCENCE/CT
                E E3+ALL
L8              QUE ABB=ON  PLU=ON  LUMINESCENCE+OLD,NT/CT
                E E80
                E E3+ALL
L9              QUE ABB=ON  PLU=ON  LUMINESCENCE SPECTROSCOPY+OLD,NT/CT
                E SPECTROMETRY/CT
                E E3+ALL
                E E2
                E E3+ALL
L10             QUE ABB=ON  PLU=ON  SPECTROSCOPY+OLD,NT/CT (L) (?FLUOR? OR
                ?LUMINESC?)
                E LUMINESCENCE/CT
                E E3+ALL
                E E79
                E E3+ALL
L11       16787 SEA ABB=ON  PLU=ON  LUMINESCENCE QUENCHING+NT/CT
L12           5 SEA ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7)
                AND L11
L13           3 SEA ABB=ON  PLU=ON  L12 AND (L8 OR L9 OR L10)
L14           5 SEA ABB=ON  PLU=ON  (L12 OR L13)

     FILE 'REGISTRY' ENTERED AT 07:58:03 ON 26 MAY 2005

     FILE 'HCAPLUS' ENTERED AT 07:58:05 ON 26 MAY 2005
L15             TRA L14 1- RN :      102 TERMS

     FILE 'REGISTRY' ENTERED AT 07:58:05 ON 26 MAY 2005
L16         102 SEA ABB=ON  PLU=ON  L15
L17          28 SEA ABB=ON  PLU=ON  L16 AND (S OR SE)/ELS

     FILE 'WPIX' ENTERED AT 07:58:58 ON 26 MAY 2005
L18       19101 SEA ABB=ON  PLU=ON  (B11-C07B OR C11-C07B OR B11-C07B2 OR
                C11-C07B2 OR B11-C07B3 OR C11-C07B3 OR B11-C7B4 OR C11-C07B4)/M
                C
L19         674 SEA ABB=ON  PLU=ON  L18 AND ?QUENCH?/BIX
                E HAWKINS E/AU
L20          18 SEA ABB=ON  PLU=ON  ("HAWKINS E"/AU OR "HAWKINS E B"/AU OR
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                "HAWKINS E F"/AU OR "HAWKINS E H"/AU OR "HAWKINS E M"/AU)
                E CENTANNI J/AU
L21           3 SEA ABB=ON  PLU=ON  "CENTANNI J M"/AU
                E SANKBEIL J/AU
L22           2 SEA ABB=ON  PLU=ON  "SANKBEIL J"/AU
                E WOOD K/AU
L23          53 SEA ABB=ON  PLU=ON  ("WOOD K"/AU OR "WOOD K V"/AU)
L24         149 SEA ABB=ON  PLU=ON  PROMEGA/CS,PA
L25           6 SEA ABB=ON  PLU=ON  L19 AND (L20 OR L21 OR L22 OR L23 OR L24)

     FILE 'HCAPLUS' ENTERED AT 08:02:07 ON 26 MAY 2005
L26           4 SEA ABB=ON  PLU=ON  L17 AND L14
L27           5 SEA ABB=ON  PLU=ON  L14 OR L26

=> b hcap

FILE 'HCAPLUS' ENTERED AT 08:03:27 ON 26 MAY 2005
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FILE LAST UPDATED: 25 May 2005  (20050525/ED)

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 This file contains CAS Registry Numbers for easy and accurate
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L27  ANSWER 1 OF 5  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:546582  HCAPLUS
DN   141:101088
ED   Entered STN:  08 Jul 2004
TI   Methods of capturing, detecting and quantifying RNA:DNA hybrids and a
     modified RNase H useful therein
IN   Carter, Richard; Rosenburg, Martin; Gentry, Daniel R.; Grinter, Nigel
PA   Promega Corporation, USA
SO   PCT Int. Appl., 85 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
IC   ICM  C12Q
CC   3-1 (Biochemical Genetics)
     Section cross-reference(s): 7, 9
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   WO 2004057016        A2    20040708    WO 2003-US41097        20031219
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
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TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US	2004229242	A1	20041118	US 2003-742355	20031218
PRAI US	2002-435136P	P	20021219		
US	2003-742355	A	20031218		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004057016	ICM	C12Q
US 2004229242	NCL	435/006.000

AB Methods for specific RNA capture, detection and quantification are presented utilizing a protein that selectively binds RNA:DNA hybrids, preferably an RNase H that is modified to reduce degradation of the nucleic acid mols. and enhance specific detection of mixed RNA:DNA nucleic acid hybrids. Labeling of the RNA and/or amplification is not required to perform these methods. Modified RNase H enzymes useful in such methods are disclosed. An optimal RNase H variant comprises the substitutions D94G, D134A, and at least two of sixteen other sequence substitutions, and fused to a peptide motif for modification by biotin ligase and phosphorylation by cAMP-dependent protein kinase.

ST RNA capture detection quantification DNA hybrid; mRNA capture detection quantification DNA hybrid; RNase H mutagenesis RNA capture detection

IT Proteins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(RNA:DNA hybrid-binding; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Escherichia coli
(RNase H from; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT DNA sequences
(for RNase H muteins from Escherichia coli; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Fluorescent indicators
(hybrid-binding protein label; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT **Fluorescence quenching**
Nucleic acid hybridization
Surface plasmon resonance
(methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT RNA
mRNA
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Mutagenesis
Protein engineering
(of RNase H from Escherichia coli; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Protein sequences
(of RNase H muteins from Escherichia coli; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Immunoassay
(of bound protein; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT DNA microarray technology

(solid support; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT Imaging
(surface plasmon resonance; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 9026-81-7, Nuclease 9068-38-6, Reverse transcriptase 433935-36-5, Polymerase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(RNA:DNA hybrid-binding; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 9050-76-4P, RNase H
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(RNA:DNA hybrid-binding; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 717607-05-1DP, variants 717607-06-2P 717607-07-3P 717607-08-4P 717607-09-5P
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 9001-78-9, Alkaline phosphatase 9014-00-0, Luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(hybrid-binding protein label; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 717607-10-8 717607-11-9
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 717129-21-0 717607-16-4 717607-17-5 717607-18-6 717607-19-7 717607-20-0 717607-21-1 717607-22-2
RL: PRP (Properties)
(unclaimed sequence; methods of capturing, detecting and quantifying RNA,DNA hybrids and a modified RNase H useful therein)
IT 50864-51-2, Single-strand-specific exonuclease
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(unhybridized nucleic acid digestion by; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 717129-21-0
RL: PRP (Properties)
(unclaimed sequence; methods of capturing, detecting and quantifying RNA,DNA hybrids and a modified RNase H useful therein)

L27 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:924094 HCAPLUS
DN 136:50649
ED Entered STN: 21 Dec 2001
TI Method for increasing luminescence assay sensitivity
IN **Hawkins, Erika; Centanni, John M.; Sankbeil, Jacqueline; Wood, Keith V.**
PA **Promega** Corporation, USA
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-48
CC 9-5 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001096862	A2	20011220	WO 2001-US18363	20010607
	WO 2001096862	A3	20020718		

```
        W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
            HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
            LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
            RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
            VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
    CA 2411179          AA    20011220    CA 2001-2411179        20010607
    EP 1297337          A2    20030402    EP 2001-942027         20010607
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
    JP 2004503777       T2    20040205    JP 2002-510941         20010607
    US 2004096924       A1    20040520    US 2003-692587         20031024
PRAI US 2000-590884     A     20000609
    WO 2001-US18363     W     20010607
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
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 WO 2001096862    ICM    G01N033-48
 WO 2001096862    ECLA   G01N033/58D
 JP 2004503777    FTERM  2G054/AA06; 2G054/EA01; 2G054/EA02; 4B063/QA20;
                         4B063/QQ61; 4B063/QQ91; 4B063/QR02; 4B063/QR58;
                         4B063/QS26; 4B063/QS36; 4B063/QX02
 US 2004096924    NCL    435/008.000
                  ECLA   G01N033/58D
AB   A method for increasing the sensitivity of a luminescent assay comprising
     carrying out the assay in the presence of an organic compound that reduces
     luminescence that is not dependent on the presence of an analyte by at
     least about 10 fold, and that reduces luminescence that is dependent on
     the presence of an analyte by less than about 7 fold.
ST   luminescence assay
IT   Luminescence
        (Autoluminescence; method for increasing luminescence assay
        sensitivity)
IT   Enzymes, uses
     RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
        (Luminescent; method for increasing luminescence assay sensitivity)
IT   Molecules
        (Luminogenic; method for increasing luminescence assay sensitivity)
IT   Enzymes, uses
     RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
        (Luminogenic; method for increasing luminescence assay sensitivity)
IT   Proteins
     RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
        (Obelins; method for increasing luminescence assay sensitivity)
IT   Buffers
     Cell
     Concentration (condition)
     Containers
     Detergents
       Luminescence
       Luminescence quenching
       Luminescence spectroscopy
     Oxidation
     Packaging materials
     Solutions
     Solvents
     Test kits
     Weight
     pH
        (method for increasing luminescence assay sensitivity)
IT   Aequorins
     Enzymes, uses
     RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
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(method for increasing luminescence assay sensitivity)
IT Gelatins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing luminescence assay sensitivity)
IT Organic compounds, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing luminescence assay sensitivity)
IT Albumins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(serum, bovine; method for increasing luminescence assay sensitivity)
IT 56-65-5, 5'-ATP, uses 521-31-3, Luminol 2591-17-5, Beetle luciferin 9001-78-9, Alkaline phosphatase 9014-00-0, Luciferase 61869-41-8, Renilla luciferase 61969-99-1, Cypridina luciferase 61970-00-1, Firefly luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for increasing luminescence assay sensitivity)
IT 62-56-6, Thiourea, analysis 67-68-5, DMSO, analysis 105-81-7, 1-Allyl-3-(2-hydroxyethyl)-2-thiourea 3180-51-6, 6-Azathiothymidine 7722-84-1, Hydrogen peroxide, analysis 7732-18-5, Water, analysis 7775-14-6, Sodium hydrosulfite 9005-64-5, Tween 20 55779-48-1, Coelenterazine 71833-44-8, Zwittergent
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing luminescence assay sensitivity)
IT 2591-17-5, Beetle luciferin
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for increasing luminescence assay sensitivity)
IT 62-56-6, Thiourea, analysis 67-68-5, DMSO, analysis 105-81-7, 1-Allyl-3-(2-hydroxyethyl)-2-thiourea 3180-51-6, 6-Azathiothymidine 7775-14-6, Sodium hydrosulfite
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing luminescence assay sensitivity)

L27 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:560001 HCAPLUS
DN 135:148189
ED Entered STN: 03 Aug 2001
TI Nucleic acid detection by 3'-depolymerization of probe-target hybrids and detection of released labeled identifier nucleotides
IN Shultz, John William; Lewis, Martin K.; Mandrekar, Michelle; Leippe, Donna; Smith, Roderick R., Jr.; Welch, Roy
PA Promega Corp., USA
SO U.S., 23 pp., Cont.-in-part of U.S. Ser. No. 358,972.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12Q001-68
ICS C12P019-34; G01N024-00; C07H019-04
INCL 435006000
CC 3-1 (Biochemical Genetics)
FAN.CNT 18

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6268146	B1	20010731	US 1999-425460	19991122
	US 6335162	B1	20020101	US 1998-42287	19980313
	US 6159693	A	20001212	US 1999-252436	19990218
	US 6235480	B1	20010522	US 1999-358972	19990721
	WO 2000049182	A2	20000824	WO 2000-US4281	20000218
	WO 2000049182	A3	20010405		
	W: AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 2000037019	A5	20000904	AU 2000-37019	20000218

PRAI US 1998-42287 A2 19980313
US 1999-252436 A2 19990218
US 1999-358972 A2 19990721
US 1999-425460 A 19991022
WO 2000-US4281 W 20000218

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6268146	ICM	C12Q001-68
	ICS	C12P019-34; G01N024-00; C07H019-04
	INCL	435006000
US 6268146	NCL	435/006.000; 435/091.200; 435/091.500; 436/173.000; 436/501.000; 536/024.310; 536/024.320
	ECLA	C12Q001/04; C12Q001/66; C12Q001/68; C12Q001/68B; C12Q001/68B6+535/131+521/319; C12Q001/68B2F+535/131+521/319; C12Q001/68B6; C12Q001/68B2F
US 6335162	NCL	435/006.000; 435/091.100
	ECLA	C12Q001/68; C12Q001/68B; C12Q001/68B6
US 6159693	NCL	435/006.000; 435/017.000; 435/021.000; 435/810.000; 436/501.000
	ECLA	C12Q001/04; C12Q001/66; C12Q001/68; C12Q001/68B; C12Q001/68B6+535/131+521/319; C12Q001/68B2F+535/131+521/319; C12Q001/68B2F; C12Q001/68B6
US 6235480	NCL	435/006.000; 435/091.200; 435/091.500; 436/173.000; 436/501.000
	ECLA	C12Q001/04; C12Q001/66; C12Q001/68; C12Q001/68B; C12Q001/68B6+535/131+521/319; C12Q001/68B2F+535/131+521/319; C12Q001/68B6; C12Q001/68B2F
WO 2000049182	ECLA	C12Q001/68B6+535/131+521/319; C12Q001/68B2F+535/131+521/319; C12Q001/68B2F; C12Q001/68B6A

AB A method of this invention is used to determine the presence or absence of a predetd. (known) nucleic acid target sequence in a nucleic acid sample. A treated sample is provided that may contain a predetd. nucleic acid target sequence hybridized with a nucleic acid probe that includes an identifier nucleotide in the 3'-terminal region. The treated sample is admixed with a depolymg. amount of an enzyme whose activity is to release one or more nucleotides from the 3'-terminus of a hybridized nucleic acid probe to form a treated reaction mixture The presence of released identifier nucleotides is analyzed to obtain an anal. output, the anal. output indicating the presence or absence of the nucleic acid target sequence. The anal. output is obtained by mass spectrometry, fluorescence spectroscopy or absorption spectroscopy as discussed herein. The hybrid of the target nucleic acid and the probe is treated with a 3'→5'-exonuclease to release an identifier nucleotide from the 3'-end region of the probe, thereby providing evidence of the presence or absence of the target nucleic acid in a sample. The released identifier nucleotide may be fluorescently labeled for detection by fluorescence spectroscopy, or may be detected by mass spectrometric anal. Examples are provided for the detection of targets associated with blood coagulation (e.g., coagulation factor V Leiden or prothrombin). In one contemplated embodiment of the invention, the enzyme whose activity is to depolymerize hybridized nucleic acid to release nucleotides from the probe 3'-terminal end is a template-dependent polymerase. In such an embodiment, the reverse of a polymerase reaction (pryophosphorolysis) is used to depolymerize a nucleic acid probe, and the identifier nucleotide is released most efficiently when the 3'-terminal nucleotide of the nucleic acid probe hybridizes with total complementarity to its nucleic acid target sequence. Polymerases with 3' to 5' exonuclease activity can also be used. In alternative multiplex embodiments, ATP is produced via nucleotide diphosphate kinase (NDPK) use of released nucleotides as phosphate donors in the presence of ADP.

ST nucleic acid detection exonuclease hybridization probe depolymn nucleotide

identifier
IT Nucleotides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(labeled; nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT Absorption spectroscopy
Desorption mass spectrometry
Electrospray ionization mass spectrometry
Fluorescence quenching
Fluorescent indicators
Fluorometry
Mass spectrometry
Nucleic acid hybridization
(nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT Nucleic acids
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT RNA
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(poly(A)-containing; nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT Depolymerization
(pyrophosphorolysis; nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT 9012-90-2, DNA polymerase 79393-91-2, 3'→5' Exonuclease
RL: BUU (Biological use, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
(nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT 170086-75-6 170086-76-7 351122-61-7 351122-64-0 351122-65-1
351122-99-1 351123-00-7 351123-03-0 351123-04-1 351123-06-3, 76:
PN: US6312902 SEQID: 2 unclaimed DNA
RL: PRP (Properties)
(unclaimed nucleotide sequence; nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
IT 9026-51-1, Nucleotide diphosphate kinase 37228-74-3, Exonuclease
344315-57-7, Polymerase
RL: BUU (Biological use, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
(used to depolymerize hybridized nucleic acid to release nucleotides from the probe; nucleic acid detection by 3'-depolymn. of probe-target hybrids and detection of released labeled identifier nucleotides)
RE.CNT 150 THERE ARE 150 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L27 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:696884 HCAPLUS
DN 127:356759
ED Entered STN: 05 Nov 1997
TI Novel reagent, method, and kit for the quantitation of oxidation-reduction phenomena in proteins and peptides
IN Shultz, John W.; Selman, Susanne; Simpson, Daniel J.
PA Promega Corporation, USA
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-26
ICS C07D271-12; C07D413-12; G01N031-22
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 79, 80
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9739141	A1	19971023	WO 1997-US6152	19970414
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5952186	A	19990914	US 1996-631892	19960414
AU 9726673	A1	19971107	AU 1997-26673	19970414
EP 900284	A1	19990310	EP 1997-918605	19970414
R: CH, DE, ES, FR, GB, IT, LI				
PRAI US 1996-631892	A	19960414		
WO 1997-US6152	W	19970414		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9739141	ICM	C12Q001-26
	ICS	C07D271-12; C07D413-12; G01N031-22
WO 9739141	ECLA	C07D271/12; C07D413/12+339+271; C12Q001/26; G01N031/22
US 5952186	NCL	435/007.900; 435/004.000; 435/113.000; 436/120.000; 548/126.000
	ECLA	C07D271/12; C07D413/12+339+271; C12Q001/26; G01N031/22

AB A first embodiment of the method is for analyzing the amount of methionine sulfoxide in a protein sample and includes the steps of contacting a protein solution with methionine sulfoxide reductase in the presence of a reducing reagent bearing a covalently-linked reporter tag, whereby the

reducing reagent is oxidized. The oxidized reducing reagent formed, which is proportional to the amount of methionine sulfoxide in the sample, is then quantified. A second embodiment of the method is for analyzing the amount of disulfide linkages in a polypeptide or protein sample. It proceeds in the same fashion as above, but in the absence of any enzyme. A novel fluorescently-labeled reducing agent and kits to practice the method are also disclosed.

ST protein methionine sulfoxide disulfide bond detn; reductase methionine sulfoxide detn peptide protein

IT Proteins, specific or class
RL: AMX (Analytical matrix); ANST (Analytical study)
(disulfide-containing; methionine sulfoxide and disulfide bonds determination in proteins)

IT Metals, analysis
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(divalent; methionine sulfoxide and disulfide bonds determination in proteins)

IT Disulfide group
Fluorescence quenching
Fluorescent substances
Molecular cloning
Test kits
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Peptides, analysis
RL: AMX (Analytical matrix); ANST (Analytical study)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Metals, analysis
RL: ANT (Analyte); ANST (Analytical study)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Salts, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Thioredoxins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(methionine sulfoxide reductase-encoding; methionine sulfoxide and disulfide bonds determination in proteins)

IT Proteins, specific or class
RL: AMX (Analytical matrix); ANST (Analytical study)
(methionine sulfoxide-containing; methionine sulfoxide and disulfide bonds determination in proteins)

IT **62697-73-8P**, Methionine sulfoxide
RL: ANT (Analyte); PUR (Purification or recovery); RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **60-24-2**, β-Mercaptoethanol 79-08-3, Bromoacetic acid 128-53-0 7447-39-4, Cupric chloride, uses 7646-79-9, Cobaltous chloride, uses 7646-85-7, Zinc chloride (ZnCl2), uses 7647-17-8, Cesium chloride, uses 7705-08-0, Ferric chloride, uses **7758-98-7**, Copper sulfate, uses **7785-87-7**, Manganese sulfate 7786-30-3, Magnesium chloride, uses **7786-81-4**, Nickel sulfate 7791-11-9, Rubidium chloride, uses 10043-52-4, Calcium chloride (CaCl2), uses 78206-57-2, Peptide Methionine sulfoxide reductase **198404-42-1D**, derivs. 198504-82-4 198504-83-5
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **3483-12-3**, Dithiothreitol
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **198404-38-5P 198404-39-6P**
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(methionine sulfoxide and disulfide bonds determination in proteins)
IT 63-68-3, L-Methionine, reactions 14193-38-5,
trans-1,2-Dithiane-4,5-diol 88235-25-0 145195-58-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(methionine sulfoxide and disulfide bonds determination in proteins)
IT 198404-40-9P 198404-41-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(methionine sulfoxide and disulfide bonds determination in proteins)
IT 62697-73-8P, Methionine sulfoxide
RL: ANT (Analyte); PUR (Purification or recovery); RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
(methionine sulfoxide and disulfide bonds determination in proteins)
IT 60-24-2, β-Mercaptoethanol 7758-98-7, Copper sulfate, uses 7785-87-7, Manganese sulfate 7786-81-4, Nickel sulfate 198404-42-1D, derivs.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)
IT 3483-12-3, Dithiothreitol
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)
IT 198404-38-5P 198404-39-6P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)
IT 63-68-3, L-Methionine, reactions 14193-38-5,
trans-1,2-Dithiane-4,5-diol
RL: RCT (Reactant); RACT (Reactant or reagent)
(methionine sulfoxide and disulfide bonds determination in proteins)
IT 198404-40-9P 198404-41-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(methionine sulfoxide and disulfide bonds determination in proteins)

L27 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:124462 HCAPLUS
DN 126:128995
ED Entered STN: 24 Feb 1997
TI Quenching reagents and assays for enzyme-mediated luminescence
IN Sherf, Bruce A.; Wood, Keith V.; Schenborn, Elaine T.
PA Promega Corporation, USA
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-66
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 7, 79, 80
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640988	A1	19961219	WO 1996-US9833	19960606
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
	US 5744320	A	19980428	US 1995-472546	19950607
	CA 2221522	AA	19961219	CA 1996-2221522	19960606
	CA 2221522	C	20031007		
	AU 9661089	A1	19961230	AU 1996-61089	19960606
	AU 721172	B2	20000622		
	EP 833939	A1	19980408	EP 1996-918421	19960606
	EP 833939	B1	20020403		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

	JP 11507534	T2	19990706	JP 1997-502037	19960606
	JP 3601606	B2	20041215		
	AT 215609	E	20020415	AT 1996-918421	19960606
	PT 833939	T	20020930	PT 1996-918421	19960606
	ES 2173292	T3	20021016	ES 1996-918421	19960606
PRAI	US 1995-472546	A	19950607		
	WO 1996-US9833	W	19960606		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9640988	ICM	C12Q001-66
WO 9640988	ECLA	C12Q001/66; G01N033/58B
US 5744320	NCL	435/008.000; 252/301.160; 252/646.000; 356/004.010; 435/004.000; 435/023.000; 435/963.000; 435/975.000
	ECLA	C12Q001/66; G01N033/58B

AB The present invention relates to single and dual-reporter luminescence assays utilizing general and specific reagents to quench enzyme (e.g., luciferase)-mediated reactions. In one embodiment of the invention, a reagent is added to the assay which non-specifically quenches enzyme-mediated luminescent reactions. In another embodiment of the invention, a reagent is added to the assay which simultaneously quenches one enzyme-mediated luminescent reaction while activating another distinct enzyme-mediated luminescent reaction. An assay kit containing specific quench reagents and the reagents themselves are also disclosed.

ST enzyme mediated luminescence assay quenching reagent; luciferase mediated luminescence assay quenching reagent

IT Inks
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
(India; quenching reagents and assays for enzyme-mediated luminescence)

IT Analysis
(enzymic anal.; quenching reagents and assays for enzyme-mediated luminescence)

IT **Luminescence quenching**
Luminescence spectroscopy
(quenching reagents and assays for enzyme-mediated **luminescence**
)

IT 9014-00-0, Luciferase 61970-00-1, Photinus pyralis luciferase
RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(quenching reagents and assays for enzyme-mediated luminescence)

IT 56-65-5, uses 60-00-4, EDTA, uses 67-63-0, Isopropanol, uses 71-36-3, 1-Butanol, uses 77-92-9, Citric acid, uses **92-36-4**, 2-(4-Aminophenyl)-6-methylbenzothiazole **95-16-9**, Benzothiazole **151-21-3**, SDS, uses **883-93-2**, 2-Phenylbenzothiazole 2190-95-6, Dimethyldecylphosphine oxide **3411-95-8**, 2-(o-Hydroxyphenyl)benzothiazole 7553-56-2, Iodine, uses 7681-82-5, Sodium iodide, uses 7722-88-5, Tetrasodium pyrophosphate **7757-82-6**, Sodium sulfate, uses 9002-93-1, Triton x-100 9005-64-5, Tween 20 13291-61-7, trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic acid 14000-31-8, Pyrophosphate 14797-55-8, Nitrate, uses **14808-79-8**, Sulfate, uses **20115-09-7** 20461-54-5, Iodide, uses 55779-48-1, Coelenterazine
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
(quenching reagents and assays for enzyme-mediated luminescence)

IT **92-36-4**, 2-(4-Aminophenyl)-6-methylbenzothiazole **95-16-9**, Benzothiazole **151-21-3**, SDS, uses **883-93-2**, 2-Phenylbenzothiazole **3411-95-8**, 2-(o-Hydroxyphenyl)benzothiazole **7757-82-6**, Sodium sulfate, uses **14808-79-8**, Sulfate, uses **20115-09-7**
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
(quenching reagents and assays for enzyme-mediated luminescence)

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MOST RECENT DERWENT UPDATE:     200533        <200533/DW>
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    FOR DETAILS. <<<

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L25  ANSWER 1 OF 6  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
AN   2005-313969 [32]   WPIX
DNC  C2005-097679
TI   Analyzing a target nucleic acid comprises exposing the nucleic acid to
     polymerase, amplification primers and non-natural nucleotides, so that an
     extension product incorporating the non-natural nucleotide is generated.
DC   B04 D16
IN   BROW, M A; CASIMIR, D A
PA   (PROM-N) PROMEGA CORP
CYC  1
PI   US 2005084894   A1 20050421 (200532)*      15    C12Q001-68
ADT  US 2005084894 A1 Provisional US 2003-512638P 20031020, US 2004-969032
     20041020
PRAI US 2003-512638P      20031020; US 2004-969032      20041020
IC   ICM  C12Q001-68
     ICS  C12P019-34
AB   US2005084894 A UPAB: 20050520
     NOVELTY - Analyzing target nucleic acid (M1), comprising exposing target
     nucleic acid to polymerase, a first amplification primer having a first
     non-natural nucleotide, a second amplification primer, and an extension
     disabled second non-natural nucleotide under conditions such that an
     extension product which incorporates the second non-natural nucleotides is
     generated from at least the second amplification primer, is new.
          DETAILED DESCRIPTION - Analyzing a target nucleic acid, comprising
     exposing a target nucleic acid to polymerase, a first amplification primer
     having a first non-natural nucleotide, a second amplification primer, and
     an extension disabled second non-natural nucleotide complementary to said
     first non-natural nucleotide under conditions such that an extension
     product is generated from at least the second amplification primer, where
     the extension product incorporates the second non-natural nucleotides, is
     new.
          INDEPENDENT CLAIMS are also included for:
          (1) analyzing a target nucleic acid using non-natural nucleotides
     (M2), comprising:
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(a) providing a first non-natural nucleotide; a sample suspected of comprising a target nucleic acid; a first amplification primer having a second non-natural nucleotide, which has a sequence selected to be upstream of a region of the target nucleic acid to be amplified; a second amplification primer; and a polymerase;

(b) exposing the sample to the first non-natural nucleotide, the first and second amplification primers and the polymerase under conditions where an extension product is generated from at least the second amplification primer, where the extension product incorporates at least one of the first non-natural nucleotides;

(2) a kit comprising an extension disabled non-naturally occurring nucleotide, a first oligonucleotide primer comprising a 3' region complementary to a first portion of the target nucleic acid and a 5' region comprising a tag sequence, a second oligonucleotide primer comprising a 3' region comprising a sequence complementary to a second portion of the target nucleic acid, a 5' region comprising the tag sequence, a 5' terminal region comprising a non-natural base, and a reporter comprising a label and a non-natural base that is complementary to the non-natural base in the second oligonucleotide primer;

(3) manufacturing oligonucleotide design data (M3) used for selecting a region, comprising providing a sequence of the target nucleic acid to a processor, where the processor is configured to analyze a sequence characteristic of the region selected from location of the natural bases in the region, number of natural bases in the region, and presence of natural bases in the region; and generating oligonucleotide design data using the analyzed sequence characteristic;

(4) manufacturing a primer (M4) used in performing M2, comprising selecting a primer sequence so as to amplify the region, which is selected to avoid or minimize the presence of natural nucleotides that can base-pair with the first non-natural nucleotide; and manufacturing a primer having the sequence; and

(5) detecting a target nucleic acid (M5).

USE - The kit and methods are useful for detecting and analyzing nucleic acid. Other methods are useful for manufacturing oligonucleotide design data used for selecting a region and for manufacturing a primer used in performing the method of analyzing nucleic acid. (All claimed).

Dwg.0/4

FS CPI
FA AB; DCN
MC CPI: B04-B03E; B04-E01; B04-E05; B04-E12; B04-L04A; B04-L08; B11-C07B3; B11-C08E3; B11-C08E5; B11-C11; B12-K04F; D05-A02B; D05-H09; D05-H18B

L25 ANSWER 2 OF 6 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2004-642305 [62] WPIX
DNN N2004-507942 DNC C2004-230903
TI Assaying an enzyme-mediated luminescence reaction for genetic activity assays, comprises introducing a composition that **quenches** a reaction and determining or detecting luminescence energy produced by a second reaction.
DC B04 D16 S03
IN BUTLER, B; **HAWKINS, E; WOOD, K V**
PA (BUTL-I) BUTLER B; (HAWK-I) HAWKINS E; (WOOD-I) WOOD K V; (PROM-N) **PROMEGA CORP**
CYC 108
PI WO 2004072299 A1 20040826 (200462)* EN 77 C12Q001-66
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
US 2004224377 A1 20041111 (200475) C12Q001-66
ADT WO 2004072299 A1 WO 2004-US4075 20040212; US 2004224377 A1 Provisional US 2003-447065P 20030212, US 2004-777461 20040212

PRAI US 2003-447065P 20030212; US 2004-777461 20040212
IC ICM C12Q001-66
ICS C09K011-00; G01N021-76; G01N033-58
AB WO2004072299 A UPAB: 20040928
NOVELTY - Assaying an enzyme-mediated luminescence reaction comprises:
(a) detecting or determining luminescence energy produced by an enzyme-mediated luminescence reaction;
(b) introducing a composition capable of selectively **quenching** the reaction and initiating a second enzyme-mediated luminescence reaction distinct from the first; and
(c) detecting or determining luminescence energy produced by the second reaction.
DETAILED DESCRIPTION - Assaying an enzyme-mediated luminescence reaction comprises: (a) detecting or determining luminescence energy produced by at least one first enzyme-mediated luminescence reaction which is not a beetle luciferase-mediated reaction; (b) introducing a composition capable of selectively **quenching** the first enzyme-mediated luminescence reaction and initiating a second enzyme-mediated luminescence reaction distinct from the first enzyme-mediated luminescence reaction, where the composition comprises at least one selective **quench** reagent for the first enzyme-mediated luminescence reaction; and (c) detecting or determining luminescence energy produced by the second enzyme-mediated luminescence reaction.
INDEPENDENT CLAIMS are also included for the following:
(1) an enzyme-mediated luminescence reaction assay kit comprising at least one functional enzyme substrate for a molecule to be detected by the enzyme-mediated luminescence reaction, where the substrate is not a beetle luciferase substrate, a first container, the at least one functional enzyme substrate disposed in it, a composition comprising at least one selective **quench** reagent which is a substrate analog inhibitor for the enzyme which mediates the luminescence reaction, a colored compound, or a nonionic detergent which is not Triton X-100 (RTM) or Tween 20 (RTM), a second container, the composition disposed in it, and instructions for use, or comprising at least one functional enzyme substrate for a molecule to be detected by the enzyme-mediated luminescence reaction, a first container, the functional enzyme substrate disposed in it, a composition comprising at least one selective **quench** reagent for an anthozoan luciferase, a second container, the composition disposed in it, and instructions for use;
(2) a dual reporter enzyme-mediated luminescence reaction assay kit comprising a first functional enzyme substrate for a molecule to be detected by a first enzyme-mediated luminescence reaction, a first container, the first functional enzyme substrate disposed in it, a **quench**-and-activate composition comprising at least one selective **quench** reagent for an enzyme which mediates the first luminescence reaction and a second and distinct functional enzyme substrate corresponding to a second and distinct enzyme-mediated luminescence reaction, where the enzyme which mediates the first luminescence reaction is not a beetle luciferase, a second container, the **quench**-and-activate composition disposed in it, and instructions for use, or comprising a first functional enzyme substrate for a molecule to be detected by a first enzyme-mediated luminescence reaction, where the substrate is not a substrate for a beetle luciferase, a first container, the first functional enzyme substrate disposed in it, a **quench**-and-activate composition comprising at least one selective **quench** reagents and a second and distinct functional enzyme substrate corresponding to a second and distinct enzyme-mediated luminescence reaction, a second container, the **quench**-and-activate composition disposed in it, and instructions for use;
(3) a method to reduce or inhibit analyte-independent or analyte-dependent phosphorescence in an enzyme-mediated luminescence reaction; and
(4) an enzyme-mediated luminescence reaction assay kit comprising at least one functional enzyme substrate for a molecule to be detected by the enzyme-mediated luminescence reaction, a first container, the functional enzyme substrate disposed in it, at least one colored compound, a second

container, the at least one colored compound disposed in it, and instructions for use, where the color of the at least one compound is substantially the same as the light emitted by the enzyme-mediated luminescence reaction, or comprising at least one colored compound and at least one functional enzyme substrate for a molecule to be detected by the enzyme-mediated luminescence reaction, a first container, the colored compound and functional enzyme substrate disposed in it, and instructions for use, where the color of the at least one compound is substantially the same as the light emitted by the enzyme-mediated luminescence reaction, or comprising a **quench**-and-activate composition comprising at least one selective **quench** reagent for an enzyme which mediates a luminescence reaction and a functional enzyme substrate for a molecule to be detected by a second and distinct enzyme-mediated luminescence reaction, where the enzyme which mediates the first luminescence reaction is not a beetle luciferase, a container, the **quench**-and-activate composition disposed in it, and instructions for use.

USE - The method is useful in luminescence assays of genetic activity or in assays of enzyme-mediated luminescence reactions.

Dwg.0/5

FS CPI EPI
FA AB; DCN
MC CPI: B04-C02C; B04-L01; **B11-C07B**; B11-C08E3; B12-K04; D05-H09; D05-H10
EPI: S03-E04E; S03-E14H

L25 ANSWER 3 OF 6 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2004-500305 [47] WPIX
DNC C2004-185336
TI Detecting a specific RNA sequence utilizing a protein that selectively binds RNA DNA hybrids, preferably an RNase H modified to reduce degradation of the nucleic acid molecules and enhance detection of mixed RNA DNA hybrids.
DC B04 D16
IN CARTER, R; GENTRY, D R; GRINTER, N; ROSENBURG, M; CARTER, R H; ROSENBERG, M
PA (PROM-N) **PROMEGA CORP**; (CART-I) CARTER R H; (GENT-I) GENTRY D R; (GRIN-I) GRINTER N; (ROSE-I) ROSENBERG M
CYC 106
PI WO 2004057016 A2 20040708 (200447)* EN 85 C12Q000-00
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
AU 2003299858 A1 20040714 (200474) C12Q000-00
US 2004229242 A1 20041118 (200477) C12Q001-68
ADT WO 2004057016 A2 WO 2003-US41097 20031219; AU 2003299858 A1 AU 2003-299858 20031219; US 2004229242 A1 Provisional US 2002-435136P 20021219, US 2003-742355 20031218
FDT AU 2003299858 A1 Based on WO 2004057016
PRAI US 2003-742355 20031218; US 2002-435136P 20021219
IC ICM C12Q000-00; C12Q001-68
AB WO2004057016 A UPAB: 20040723

NOVELTY - Detecting a specific RNA sequence comprising providing a mixture that may contain an RNA:DNA hybrid molecule comprising a specific RNA sequence of interest and a DNA probe complementary to the RNA sequence, combining the mixture with a protein other than an antibody that preferentially hybridizes to RNA:DNA hybrid molecules to form bound protein, and detecting the bound protein, where the binding of the protein indicates that an RNA:DNA hybrid molecule, and a specific RNA sequence, is present, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) carrying out an RNase protection assay, comprising providing a

mixture that may contain an RNA:DNA hybrid molecule comprising a specific RNA sequence of interest and a labeled DNA probe complementary to the RNA sequence, combining the mixture with a protein other than an antibody that preferentially hybridizes to RNA:DNA hybrid molecules to form bound protein, and detecting the bound protein, where the binding of the protein indicates the presence of a RNA:DNA hybrid molecule that was subject to RNase protection where the detecting step comprises digestion of single-stranded RNA using RNase;

(2) a protein that preferentially binds RNA:DNA hybrid molecules, where the protein has a fully defined amino acid sequence of 155 amino acids (SEQ ID NO: 1) as given in the specification, with sequence substitutions on the amino acid residue corresponding to position 134 is an alanine residue, the residue corresponding to position 94 is a glycine residue, an aspartic acid, or glutamic acid residue, and at least two of the 17 residues listed and given in the specification, and where the protein is isolated and purified;

(3) an isolated and purified nucleic acid where the coding portion of the nucleic-acid encodes a protein of (2);

(4) detecting the presence or absence of an RNA:DNA hybrid, comprising providing a possible RNA:DNA hybrid, exposing the possible RNA:DNA hybrid to an RNA:DNA hybrid binding protein such that the RNA:DNA hybrid binding protein would bind to the RNA:DNA hybrid if it were present, determining whether the RNA:DNA hybrid binding protein was bound, the binding of the RNA:DNA hybrid binding protein indicating that an RNA:DNA hybrid is present;

(5) detecting the presence or absence of specific RNA molecules, comprising providing a DNA probe bound to a region of a solid support, providing a test sample that may contain RNA capable of hybridizing to the DNA probe, contacting the DNA probe with the test sample under hybridizing conditions to permit hybridization of the DNA probe with RNA capable of hybridizing to the DNA probe to form an RNA:DNA hybrid when the appropriate RNA is present, providing a RNase H enzyme, contacting the regions of the solid support where the DNA probe is bound with the RNase H enzyme, maintaining the contact between the solid support and the RNase H enzyme to permit binding of the RNase H enzyme to the RNA:DNA hybrid when such a hybrid is present, analyzing the region of the solid support where the DNA probe is bound for the presence or absence of bound RNase H, thereby detecting the presence or absence of the specific RNA molecule capable of hybridizing to the DNA probe; and

(6) an RNA:DNA hybrid binding protein reagent composition, comprising RNA:DNA hybrid binding protein covalently linked to a donor or **quencher** of a fluorescent donor/**quencher** pair, and a nucleic acid covalently linked to the other **quencher** or donor of the fluorescent donor/**quencher** pair, such that when the nucleic acid is bound to the RNA:DNA hybrid binding protein, the fluorescence of the donor is **quenched**

USE - The methods and compositions of the present invention are useful in the field of nucleic acid detection, in particular for detecting RNA:DNA hybrids and proteins having RNA:DNA hybrid-binding activity.

Dwg.0/9

FS CPI
FA AB
MC CPI: B04-B03C; B04-C01G; B04-E01; B04-E02F; B04-E03F; B04-E05; B04-L05A; B04-N04A; **B11-C07B3**; B11-C08E3; B11-C08E5; B12-K04F; D05-H09; D05-H10; D05-H12A

L25 ANSWER 4 OF 6 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2004-315589 [29] WPIX
DNN N2004-251477 DNC C2004-119620
TI Measuring transferase activity by performing enzyme reaction using enzyme, enzyme substrate, ATP, and contacting reaction mixture with reagent having luminogenic molecule and bioluminescence-generating enzyme to generate bioluminescence.
DC B04 B05 D16 S03
IN GOUELI, S A; SOMBERG, R
PA (PROM-N) **PROMEGA CORP**

CYC 105
PI WO 2004023098 A2 20040318 (200429)* EN 71 G01N000-00
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
US 2004101922 A1 20040527 (200435) C12Q001-48
AU 2003268489 A1 20040329 (200459) G01N000-00
ADT WO 2004023098 A2 WO 2003-US27854 20030905; US 2004101922 A1 Provisional US 2002-408662P 20020906, US 2003-655878 20030905; AU 2003268489 A1 AU 2003-268489 20030905
FDT AU 2003268489 A1 Based on WO 2004023098
PRAI US 2002-408662P 20020906; US 2003-655878 20030905
IC ICM C12Q001-48; G01N000-00
AB WO2004023098 A UPAB: 20040505
NOVELTY - Measuring transferase (T) enzymatic activity involves incubating first reaction mixture (R1) comprising (T), ATP, and (T) substrate to allow for (T) reaction to occur, contacting R1 with a reagent comprising (T) **quenching** agent, a luminogenic molecule and a bioluminescence-generating enzyme to form second reaction mixture (R2) that is incubated to allow for bioluminescent reaction to occur; determining (T) activity by measuring luminescence of R2.

DETAILED DESCRIPTION - Measuring (M1) transferase (T) enzymatic activity involves providing a reagent (I) comprising a transferase **quenching** agent, a luminogenic molecule and a bioluminescence-generating enzyme, where the (T) **quenching** agent selectively stops (T) activity without substantially affecting bioluminescent enzyme activity, incubating a first reaction mixture comprising a (T), ATP, and a (T) substrate for a first predetermined time period under conditions effective to allow for a (T) reaction to occur, contacting the first reaction mixture with the reagent to form a second reaction mixture and incubating the second reaction mixture for a second predetermined time period under conditions effective to allow for a bioluminescent reaction to occur, and determining (T) activity by measuring luminescence of the second reaction mixture.

An INDEPENDENT CLAIM is also included for a kit for measuring (T) enzymatic activity comprising a reconstitution buffer solution comprising one or more (T) **quenching** agents, where the (T) **quenching** agent selectively stops (T) activity without substantially affecting bioluminescent-generating enzyme activity, a composition comprising a luminogenic molecule and a bioluminescence-generating enzyme, and directions for using the kit.

USE - (M1) is useful for measuring (T) enzymatic activity such as kinase activity or ion channel/pump activity. Preferably, the method is useful for measuring (T) enzymatic activity such as protein kinase activity, lipid kinase activity, polynucleotide kinase activity, or sugar kinase activity. The protein kinase comprises a Ser/Thr protein kinase, a protein tyrosine kinase, or a protein lipid-dependent kinase. The Ser/Thr protein kinase comprises cAMP-dependent protein kinase (PKA), calcium and phospholipid-dependent protein kinase (PKC), cGMP-dependent protein kinase (PKG), calcium and calmodulin dependent protein kinase (CaM KII) or a dual specificity protein kinase. The dual specificity protein kinase comprises mitogen activated protein kinase (MAPK) or MAPK kinase (MEK). The tyrosine kinase comprises Rous sarcoma related protein kinases (Src), or Src family protein tyrosine kinases such as Src, Lck, Fyn, or Lyn. The growth factor receptors comprise epidermal growth factor receptor (EGFR), platelet derived growth factor receptor (PDGFR), or steel growth factor receptor (c-KIT). The lipid dependent protein kinases comprises Type I phosphoinositide 3-OH phosphotidylinositol kinase (PI3K). (M1) is useful for screening a compound for its effect on (T) enzymatic activity which involves providing a compound for screening; providing (I); incubating R1 comprising (T), ATP, (T) substrate, and the compound to allow for a (T) reaction to occur; contacting R1 with (I) to form R2 which is incubated to

allow for bioluminescent reaction to occur; and determining the effect of the compound on (T) activity by measuring and comparing luminescence of R2 relative to a control mixture having no compound. (M1) is also useful in a high throughput method for rapidly screening several compounds to determine their effect on (T) enzymatic activity which involves providing several compounds for screening; providing (I); incubating several R1 each of which comprises (T), ATP, (T) substrate, and at least one compound to allow for (T) reactions to occur; contacting several R1 with (I) to form several R2 which are incubated to allow for bioluminescent reactions to occur; and determining the effect of the compounds on (T) activity by measuring and comparing luminescence of second reaction mixtures relative to at least one control mixture having no compound. The compound enhances or inhibits (T) enzymatic activity (all claimed). The method is homogeneous and can be used for a wide variety of transferases such as protein kinases and lipid kinases and substrates such as amino acids, peptides, proteins, sugars and lipids.

ADVANTAGE - The method is homogeneous, fast, sensitive, simple and non-radioactive. The methods are convenient and can be used with any instrumentation platform. The reagents required can be designed with relative ease and may be synthesized readily. The methods provide assays with fast development time and low cost. The kinase activity detection methods can be performed in a single well in a multi-well plate, making them suitable for use as high throughput screening methods. The method may be optimized by altering the amounts of ATP and kinase substrate. In addition, increasing the reaction temperature may improve kinase activity. The method can be utilized to detect kinase activity over a wide range of ATP concentrations, generally from 1-100 micro M of ATP. The method may be used to detect kinase activity at low concentration levels of ATP, generally below 5 micro M of ATP, more preferably in the range of 1-3 micro M of ATP. This method can be used to measure a distinct end-point of a kinase reaction. The reagent composition allows, in a single step, for the simultaneous **quenching** or termination of transferase activity and generation of a luminescent signal that is directly proportional to the amount of ATP present. The reagent is robust and resulting luminescence is much less susceptible to interference by library compounds than other luciferase-based ATP detection reagents. In addition, the reagent composition facilitates measurement of transferase activity in a single sample over a long period of time as well as measurement of transferase activity in many samples in a high throughput format over a long period of time, thus eliminating the need for luminometers with reagent injectors and allowing for batch-mode processing of multiple samples.

Dwg.0/8

FS CPI EPI
FA AB; DCN
MC CPI: B01-D02; B02-S; B04-L03C; B04-L04; B05-A01B; B05-C07; B06-F01; B10-A02; B10-A09A; B10-B01B; **B11-C07B3**; B11-C08E3; B12-K04; D05-H09
EPI: S03-E04E; S03-E14H

L25 ANSWER 5 OF 6 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2003-456597 [43] WPIX
CR 1999-590846 [50]; 2000-549282 [50]; 2000-549283 [50]; 2000-558304 [51]; 2000-565377 [52]; 2000-565378 [52]; 2001-182784 [18]; 2002-024902 [03]; 2002-412825 [44]; 2003-479484 [45]
DNN N2003-363112 DNC C2003-121412
TI Detecting sample nucleic acid, by depolymerizing nucleic acid hybrid and incorporating a suitable nucleotide to quantitatively and qualitatively analyze the presence of predetermined nucleic acid target sequences.
DC B04 D16 S03
IN ANDREWS, C A; OLSON, R J; SHULTZ, J W
PA (PROM-N) **PROMEGA CORP**
CYC 101
PI US 2003049624 A1 20030313 (200343)* 31 C12Q001-68
WO 2003066803 A2 20030814 (200354) EN C12N000-00
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU

MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

AU 2002365912 A1 20030902 (200425) C12Q001-68

ADT US 2003049624 A1 CIP of US 1998-42287 19980313, CIP of US 1999-252436 19990218, CIP of US 1999-358972 19990721, Div ex US 1999-406064 19990927, CIP of US 2001-788847 20010220, US 2001-924981 20010807; WO 2003066803 A2 WO 2002-US25021 20020807; AU 2002365912 A1 AU 2002-365912 20020807

FDT US 2003049624 A1 CIP of US 6159693, CIP of US 6235480, Div ex US 6270973, CIP of US 6335162; AU 2002365912 A1 Based on WO 2003066803

PRAI US 2001-924981 20010807; US 1998-42287 19980313;
US 1999-252436 19990218; US 1999-358972 19990721;
US 1999-406064 19990927; US 2001-788847 20010220

IC ICM C12N000-00; C12Q001-68
ICS C12P019-34

AB US2003049624 A UPAB: 20040418

NOVELTY - Detecting (M) a nucleic acid hybrid or target, or a specific nucleic acid base at an interrogation position of nucleic acid target, in a sample, or determining nucleotide sequence of a nucleic acid hybrid, involves depolymerization of a nucleic acid hybrid and incorporation of a suitable nucleotide to quantitatively and qualitatively analyze for the presence of predetermined nucleic acid target sequences.

DETAILED DESCRIPTION - Detecting (M) a nucleic acid hybrid or target, or a specific nucleic acid base at an interrogation position of nucleic acid target, in a sample, or determining nucleotide sequence of a nucleic acid hybrid, involves depolymerization of a nucleic acid hybrid and incorporation of a suitable nucleotide to quantitatively and qualitatively analyze for the presence of predetermined nucleic acid target sequences further involves:

(a) determining the presence or absence of a nucleic acid hybrid in a sample, or determining a nucleotide sequence of nucleic acid hybrid, by:

(i) providing a reaction mixture comprising a sample that contains a nucleic acid hybrid (I) comprising a 3'-terminus, pyrophosphate, an enzyme (E) that catalyzes the release of a nucleotide from (I) by pyrophosphorolysis of the 3'-terminus of a strand of (I) in the presence of pyrophosphate, and a suitable nucleotide that can be incorporated in the place of the released nucleotide;

(ii) maintaining the reaction mixture for a time period and under conditions that permit pyrophosphorolysis of the 3'-terminus of a strand of (I) to produce a released nucleotide and a modified 3'-terminus as well as the incorporation of the suitable nucleotide into the modified 3'-terminus of (I) to produce an incorporated modified 3'-terminus, thus forming a treated sample; and

(iii) assaying the treated sample to determine whether incorporation of the suitable nucleotide into the hybrid occurred;

(b) determining the presence or absence of a nucleic acid target in a sample, by providing a reaction mixture comprising a sample that may contain a nucleic acid target, a nucleic acid probe corresponding to the nucleic acid target, pyrophosphate, (E), which comprises a 3'-terminus, by pyrophosphorolysis of the 3'- terminus of a strand of the nucleic acid hybrid in the presence of pyrophosphate, and a suitable nucleotide that can be incorporated in the place of the released nucleotide, maintaining the reaction mixture for a time period and under conditions that permit hybridization of the nucleic acid target with nucleic acid probe to form (I), pyrophosphorolysis of the 3'-terminus of a strand of a nucleic acid hybrid to produce a released nucleotide and a modified 3'-terminus as well as the incorporation of the suitable nucleotide into the modified 3'-terminus of (I) to produce an incorporated modified 3'-terminus, thus forming a treated sample, and assaying the treated sample to determine whether incorporation of the suitable nucleotide occurred; or

(c) determining the presence or absence of a specific nucleic acid base at an interrogation position of a nucleic acid target in a sample, by providing a reaction mixture comprising a sample that may contain a

nucleic acid target having a nucleic acid residue at an interrogation position, a nucleic acid probe comprising a nucleic acid residue in its 3'-terminus that base pairs with the interrogation position of the nucleic acid target when the nucleic acid target and the nucleic acid probe are hybridized to form a nucleic acid hybrid, pyrophosphate, (E) and a suitable nucleotide that can be incorporated in the place of the released nucleotide, maintaining the reaction mixture for a time period and under conditions that permit the formation of (I) between the nucleic acid probe and target, pyrophosphorolysis of the 3'-terminus of a strand of a nucleic acid hybrid to produce a released nucleotide and a modified 3'-terminus and the incorporation of the suitable nucleotide into the modified 3'-terminus of (I) to produce an incorporated modified 3'-terminus, thus forming a treated sample, and assaying the treated sample to determine whether incorporation of the suitable nucleotide occurred.

An INDEPENDENT CLAIM is also included for a reaction mixture (II) comprising a sample that may contain (I), pyrophosphate, (E) and a suitable nucleotide that can be incorporated in the place of the released nucleotide.

USE - (M) is useful for determining the presence or absence of a nucleic acid hybrid, a nucleic acid target or a specific nucleic acid base at an interrogation position of a nucleic acid target, in a sample, or for determining a nucleotide sequence of a nucleic acid hybrid (claimed). The method is useful for detecting single nucleotide polymorphisms, identifying single base changes, for genotyping, for medical marker diagnostics, and microsequencing. The method is also useful for discriminating nucleic acid from different species, or even from different alleles.

Dwg.0/0

FS CPI EPI

FA AB; DCN

MC CPI: B04-B03C; B04-E03; B04-E04; B04-E09; B04-L01; **B11-C07B3**; B11-C08E5; B12-K04A; B12-K04F; D05-H08; D05-H09; D05-H12B1; D05-H12D1; D05-H13

EPI: S03-E14H6

L25 ANSWER 6 OF 6 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-130752 [17] WPIX

DNN N2002-098623 DNC C2002-040164

TI New method for increasing the sensitivity of a luminescent assay comprises carrying out the assay in the presence of an organic compound.

DC B04 D16 S03

IN **CENTANNI, J M; HAWKINS, E; SANKBEIL, J; WOOD, K V**

PA (PROM-N) **PROMEGA CORP**

CYC 96

PI WO 2001096862 A2 20011220 (200217)* EN 45 G01N033-48

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001075325 A 20011224 (200227)

EP 1297337 A2 20030402 (200325) EN G01N033-533

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

JP 2004503777 W 20040205 (200412) 82 G01N033-532

US 2004096924 A1 20040520 (200434) C12Q001-66

ADT WO 2001096862 A2 WO 2001-US18363 20010607; AU 2001075325 A AU 2001-75325 20010607; EP 1297337 A2 EP 2001-942027 20010607, WO 2001-US18363 20010607; JP 2004503777 W WO 2001-US18363 20010607, JP 2002-510941 20010607; US 2004096924 A1 Cont of US 2000-590884 20000609, US 2003-692587 20031024

FDT AU 2001075325 A Based on WO 2001096862; EP 1297337 A2 Based on WO 2001096862; JP 2004503777 W Based on WO 2001096862

PRAI US 2000-590884 20000609; US 2003-692587 20031024

IC ICM C12Q001-66; G01N033-48; G01N033-532; G01N033-533

ICS G01N021-76
AB WO 200196862 A UPAB: 20020313
NOVELTY - A method for increasing the sensitivity of a luminescent assay comprises carrying out the assay in the presence of an organic compound that reduces luminescence that is not dependent on the presence of an analyte by at least 10 fold, and that reduces luminescence that is dependent on the presence of an analyte by less than 7 fold.
DETAILED DESCRIPTION - A method for increasing the sensitivity of a luminescent assay comprises carrying out the assay in the presence of an organic compound that reduces
(a) luminescence that is not dependent on the presence of an analyte by at least 10 fold, and that reduces luminescence that is dependent on the presence of an analyte by less than 7 fold;
(b) luminescence generated by luminogenic molecules not bound to an enzyme by at least 10 fold and that reduces the luminescence generated by luminogenic molecules bound to an enzyme by less that 7 fold; or
(c) autoluminescence by at least about 10 fold and that reduces luminescence that is dependent on the presence of an analyte by less than 7 fold.
An INDEPENDENT CLAIM is included for an assay kit comprising packaging material containing
(1) a luminogenic substrate of a luminescent enzyme or a luminogenic enzyme; and
(2) an organic compound.
USE - The new method is used for increasing the sensitivity of a luminescent assay measurement.
Dwg.0/4
FS CPI EPI
FA AB; DCN
MC CPI: B04-L01; **B11-C07B**; B11-C08E3; B12-K04E; D05-C03; D05-H09
EPI: S03-E14H

=> b home
FILE 'HOME' ENTERED AT 08:04:05 ON 26 MAY 2005

=>

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=> d his full

     (FILE 'HOME' ENTERED AT 07:49:20 ON 26 MAY 2005)

     FILE 'HCAPLUS' ENTERED AT 07:49:25 ON 26 MAY 2005
                E HAWKINS E/AU
L1           77 SEA ABB=ON  PLU=ON  ("HAWKINS E"/AU OR "HAWKINS E A"/AU OR
                "HAWKINS E C"/AU OR "HAWKINS E D"/AU OR "HAWKINS E F"/AU OR
                "HAWKINS E G"/AU OR "HAWKINS E G E"/AU OR "HAWKINS E GREGORY"/A
                U OR "HAWKINS E L"/AU OR "HAWKINS E R"/AU OR "HAWKINS E
                ROSEMARIE"/AU OR "HAWKINS E Y"/AU)
                E HAWKINS ERIKA/AU
L2            8 SEA ABB=ON  PLU=ON  ("HAWKINS ERIKA"/AU OR "HAWKINS ERIKA
                M"/AU)
                E HAWKINS ERICA/AU
                E CENTANNI J/AU
L3           10 SEA ABB=ON  PLU=ON  ("CENTANNI J"/AU OR "CENTANNI JOHN"/AU OR
                "CENTANNI JOHN M"/AU)
                E SANKBEIL J/AU
L4            3 SEA ABB=ON  PLU=ON  ("SANKBEIL JACQUELINE"/AU OR "SANKBEIL
                JACQUI"/AU)
                E WOOD K/AU
L5           84 SEA ABB=ON  PLU=ON  ("WOOD K"/AU OR "WOOD K V"/AU)
                E WWOD KEITH/AU
                E WOOD KEITH/AU
L6           76 SEA ABB=ON  PLU=ON  ("WOOD KEITH"/AU OR "WOOD KEITH V"/AU OR
                "WOOD KEITH VERNON"/AU)
L7          256 SEA ABB=ON  PLU=ON  PROMEGA/CS,PA
                E LUMINESCENCE/CT
                E E3+ALL
L8              QUE ABB=ON  PLU=ON  LUMINESCENCE+OLD,NT/CT
                E E80
                E E3+ALL
L9              QUE ABB=ON  PLU=ON  LUMINESCENCE SPECTROSCOPY+OLD,NT/CT
                E SPECTROMETRY/CT
                E E3+ALL
                E E2
                E E3+ALL
L10             QUE ABB=ON  PLU=ON  SPECTROSCOPY+OLD,NT/CT (L) (?FLUOR? OR
                ?LUMINESC?)
                E LUMINESCENCE/CT
                E E3+ALL
                E E79
                E E3+ALL
L11       16787 SEA ABB=ON  PLU=ON  LUMINESCENCE QUENCHING+NT/CT
L12           5 SEA ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7)
                AND L11
L13           3 SEA ABB=ON  PLU=ON  L12 AND (L8 OR L9 OR L10)
L14           5 SEA ABB=ON  PLU=ON  (L12 OR L13)

     FILE 'REGISTRY' ENTERED AT 07:58:03 ON 26 MAY 2005

     FILE 'HCAPLUS' ENTERED AT 07:58:05 ON 26 MAY 2005
L15             TRA L14 1- RN :      102 TERMS

     FILE 'REGISTRY' ENTERED AT 07:58:05 ON 26 MAY 2005
L16         102 SEA ABB=ON  PLU=ON  L15
L17          28 SEA ABB=ON  PLU=ON  L16 AND (S OR SE)/ELS

     FILE 'WPIX' ENTERED AT 07:58:58 ON 26 MAY 2005
L18       19101 SEA ABB=ON  PLU=ON  (B11-C07B OR C11-C07B OR B11-C07B2 OR
                C11-C07B2 OR B11-C07B3 OR C11-C07B3 OR B11-C7B4 OR C11-C07B4)/M
                C
L19         674 SEA ABB=ON  PLU=ON  L18 AND ?QUENCH?/BIX
                E HAWKINS E/AU
L20          18 SEA ABB=ON  PLU=ON  ("HAWKINS E"/AU OR "HAWKINS E B"/AU OR
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                "HAWKINS E F"/AU OR "HAWKINS E H"/AU OR "HAWKINS E M"/AU)
                E CENTANNI J/AU
L21           3 SEA ABB=ON  PLU=ON  "CENTANNI J M"/AU
                E SANKBEIL J/AU
L22           2 SEA ABB=ON  PLU=ON  "SANKBEIL J"/AU
                E WOOD K/AU
L23          53 SEA ABB=ON  PLU=ON  ("WOOD K"/AU OR "WOOD K V"/AU)
L24         149 SEA ABB=ON  PLU=ON  PROMEGA/CS,PA
L25           6 SEA ABB=ON  PLU=ON  L19 AND (L20 OR L21 OR L22 OR L23 OR L24)

     FILE 'HCAPLUS' ENTERED AT 08:02:07 ON 26 MAY 2005
L26           4 SEA ABB=ON  PLU=ON  L17 AND L14
L27           5 SEA ABB=ON  PLU=ON  L14 OR L26

     FILE 'WPIX' ENTERED AT 08:37:23 ON 26 MAY 2005
                D QUE L18
L28       20518 SEA ABB=ON  PLU=ON  (B11-C07B OR C11-C07B OR B11-C07B2 OR
                C11-C07B2 OR B11-C07B3 OR C11-C07B3 OR B11-C7B4 OR C11-C07B4)/M
                C OR G01N021-76/IPC
L29         709 SEA ABB=ON  PLU=ON  L28 AND ?QUENCH?/BIX
L30             QUE ABB=ON  PLU=ON  (B05-B01D OR C05-B01D OR B06-C? OR C06-C?
                OR E06-C? OR B06-B? OR C06-B? OR E06-B? OR B06-F? OR C06-F? OR
                E06-F? OR B07-C? OR C07-C? OR E07-C? OR B07-B? OR C07-B? OR
                E07-B? OR B07-F? OR C07-F? OR E07-F? OR B07-G? OR C07-G? OR
                E07-G? OR B06-G? OR C06-G? OR E06-G?)/MC
L31             QUE ABB=ON  PLU=ON  (B10-A09B OR C10-A09B OR E10-A09B OR
                B10-A10? OR C10-A10? OR E10-A10? OR B10-A13A OR C10-A13A OR
                B10-E01 OR C10-E01 OR B10-E03 OR C10-E03 OR B10-F01 OR C10-F01
                OR E10-F01 OR B10-A11A? OR C10-A11A? OR E10-A11A?)/MC
L32             QUE ABB=ON  PLU=ON  (C07C303 OR C07C319 OR C07C315 OR C07C321
                OR C07C323 OR C07C 325 OR CO7C327 OR C07C329 OR C07C331 OR
                C07C333 OR C07C335 OR C07C337 OR C07C391 OR C07D333 OR C07D335
                OR C07D331 OR C07D337 OR C07D339 OR C07D341 OR C07D343 OR
                C07D345)/IPC
L33             QUE ABB=ON  PLU=ON  (C07D275 OR C07D277 OR C07D285 OR C07D279
                OR C07D295 OR C07D283 OR C07D281)/IPC
L34             QUE ABB=ON  PLU=ON  (B10-C01 OR C10-C01 OR E10-C01 OR B10-G01
                OR C10G01 OR E10-G01 OR E10-H01 OR E10-H01A OR E10-H01B)/MC OR
                (B434 OR B534 OR B634 OR B711 OR B712 OR B713 OR B721 OR B722
                OR B723)/M0,M1,M2,M3,M4,M5,M6
L35         169 SEA ABB=ON  PLU=ON  L29 AND (L30 OR L31 OR L32 OR L33 OR L34)
L36           1 SEA ABB=ON  PLU=ON  L35 AND (L20 OR L21 OR L22 OR L23 OR L24)
L37         168 SEA ABB=ON  PLU=ON  L35 NOT L36
L38       97214 SEA ABB=ON  PLU=ON  (S03-E14H? OR B11-C08E6 OR C11-C08E6 OR
                B11-C10? OR C11-C10?)/MC OR (G01N033-48 OR G01N033-49 OR
                G01N033-50 OR G01N033-52 OR G01N033-53)/IPC
L39          98 SEA ABB=ON  PLU=ON  L37 AND L38
L40          21 SEA ABB=ON  PLU=ON  L39 NOT (PY>2000 OR AY>2000 OR PRY>2000)

     FILE 'REGISTRY' ENTERED AT 09:35:59 ON 26 MAY 2005
L41           1 SEA ABB=ON  PLU=ON  NADH/CN
L42           1 SEA ABB=ON  PLU=ON  HALOTHANE/CN

     FILE 'WPIX' ENTERED AT 09:41:24 ON 26 MAY 2005
                SEL AN L40 1 6 7 9 10 11 14 19
L43           8 SEA ABB=ON  PLU=ON  (1983-47183K/AN OR 1989-145080/AN OR
                1991-172824/AN OR 1991-194806/AN OR 1991-369266/AN OR 1992-2687
                88/AN OR 1992-283976/AN OR 1997-402629/AN) AND L40

     FILE 'HCAPLUS' ENTERED AT 09:43:10 ON 26 MAY 2005
                E SULFUR/CT
                E E47+ALL
                E ORGANIC COMPOUNDS/CT
                E ORGANIC COMPOUNDS/CT
                E SELENIUM/CT
                E E9+ALL
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                E HETEROCYCLIC COMPOUNDS/CT
                E E3+OLD
L44         1194 SEA ABB=ON  PLU=ON  ORGANIC COMPOUNDS/CT (L) (SULPHUR OR
                SULFUR OR SELENIUM OR SE)
L45         1836 SEA ABB=ON  PLU=ON  (HETEROCYCLIC (1A) COMPOUND#)/CW (L)
                (SULPHUR OR SULFUR OR SELENIUM OR SE)
L46         2589 SEA ABB=ON  PLU=ON  (L8 OR L9 OR L10) (L) ?QUENCH?
L47           12 SEA ABB=ON  PLU=ON  L46 (L) (SULPHUR OR SULFUR OR SELENIUM OR
                SE)
                D SCA
L48            1 SEA ABB=ON  PLU=ON  DIVALENT/TI AND L47
                D SCA
L49            2 SEA ABB=ON  PLU=ON  (L11 OR L46) AND (L44 OR L45)
                D BIB TOT
                D SCA
L50          658 SEA ABB=ON  PLU=ON  L17 AND (L11 OR L46)
L51              QUE ABB=ON  PLU=ON  (DRUG SCREENING+OLD OR IMMUNOASSAY+OLD,NT
                OR BIOASSAY OR MICROTITER PLATES OR MICROANALYSIS+NT OR
                LAB-ON-A-CHIP+NT OR BIOCHIPS OR CLINICAL ANALYZERS OR TEST
                KITS OR MICROCHEMISTRY OR MICROTITRATION)/CT
L52        64103 SEA ABB=ON  PLU=ON  (LABORATORY WARE+NT/CT (L) (MICROTIT? OR
                MICROPLAT?)) OR ANALYS!S/CW (L) (MICRO? OR APP?) OR (FLUOROMETR
                Y+NT OR X-RAY SPECTROSCOPY+OLD,NT OR ANALYTICAL APPARATUS OR
                TITRATION+OLD,NT)/CT (L) MICRO?
L53           17 SEA ABB=ON  PLU=ON  L50 AND (L51 OR L52)
L54            3 SEA ABB=ON  PLU=ON  L53 AND (L1 OR L2 OR L3 OR L4 OR L5 OR L6
                OR L7)
L55           14 SEA ABB=ON  PLU=ON  L53 NOT L54
L56              QUE ABB=ON  PLU=ON  PY<=2000 OR AY<=2000 OR PRY<=2000 OR
                PD<20000609 OR PRD<20000609 OR AD<20000609
L57           12 SEA ABB=ON  PLU=ON  L55 AND L56
                SEL AN 4 6-8 12 L57
L58            5 SEA ABB=ON  PLU=ON  ("103:34354"/AN OR "131:223474"/AN OR
                "134:204738"/AN OR "134:219359"/AN OR "135:341179"/AN OR
                "1985:434354"/AN OR "1999:595492"/AN OR "2001:165934"/AN OR
                "2001:178382"/AN OR "2001:817223"/AN) AND L57
                D AB TOT
L59            8 SEA ABB=ON  PLU=ON  L48 OR L49 OR L58

     FILE 'BIOSIS' ENTERED AT 10:11:06 ON 26 MAY 2005
                E HAWKINS E/AU
L60          297 SEA ABB=ON  PLU=ON  ("HAWKINS E"/AU OR "HAWKINS E A"/AU OR
                "HAWKINS E C"/AU OR "HAWKINS E D"/AU OR "HAWKINS E E"/AU OR
                "HAWKINS E F"/AU OR "HAWKINS E GREGORY"/AU OR "HAWKINS E J"/AU
                OR "HAWKINS E JR"/AU OR "HAWKINS E K"/AU OR "HAWKINS E L"/AU
                OR "HAWKINS E M"/AU OR "HAWKINS E P"/AU OR "HAWKINS E R"/AU OR
                "HAWKINS E S"/AU OR "HAWKINS E T"/AU OR "HAWKINS E W"/AU OR
                "HAWKINS E Y"/AU)
                E HAWKINS ERICA/AU
L61            1 SEA ABB=ON  PLU=ON  "HAWKINS ERIKA"/AU
                E CENTANNI J/AU
L62            7 SEA ABB=ON  PLU=ON  ("CENTANNI J"/AU OR "CENTANNI JOHN"/AU OR
                "CENTANNI JOHN M"/AU)
                E SANKBEIL J/AU
L63            1 SEA ABB=ON  PLU=ON  "SANKBEIL JACQUI"/AU
                E WOOD K/AU
L64          180 SEA ABB=ON  PLU=ON  ("WOOD K"/AU OR "WOOD K V"/AU)
                E WOOD KEITH/AU
L65           18 SEA ABB=ON  PLU=ON  ("WOOD KEITH"/AU OR "WOOD KEITH V"/AU)
L66          268 SEA ABB=ON  PLU=ON  PROMEGA/CS
L67            2 SEA ABB=ON  PLU=ON  (L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR
                L66) AND ?QUENCH?

     FILE 'WPIX' ENTERED AT 10:13:16 ON 26 MAY 2005
L68            0 SEA ABB=ON  PLU=ON  L43 AND (?SULPHUR? OR ?SULFUR? OR ?SELEN?)
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=> b wpix

FILE 'WPIX' ENTERED AT 10:15:09 ON 26 MAY 2005
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FILE LAST UPDATED:          24 MAY 2005      <20050524/UP>
MOST RECENT DERWENT UPDATE:     200533        <200533/DW>
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    FOR DETAILS. <<<

=> d all l36 tot


L36  ANSWER 1 OF 1  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
AN   2004-315589 [29]    WPIX
DNN  N2004-251477        DNC C2004-119620
TI   Measuring transferase activity by performing enzyme reaction using enzyme,
     enzyme substrate, ATP, and contacting reaction mixture with reagent having
     luminogenic molecule and bioluminescence-generating enzyme to generate
     bioluminescence.
DC   B04 B05 D16 S03
IN   GOUELI, S A; SOMBERG, R
PA   (PROM-N) PROMEGA CORP
CYC  105
PI   WO 2004023098   A2 20040318 (200429)* EN   71    G01N000-00
        RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
            LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
            KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
            PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC
            VN YU ZA ZM ZW
     US 2004101922   A1 20040527 (200435)             C12Q001-48
     AU 2003268489   A1 20040329 (200459)             G01N000-00
ADT  WO 2004023098 A2 WO 2003-US27854 20030905; US 2004101922 A1 Provisional US
     2002-408662P 20020906, US 2003-655878 20030905; AU 2003268489 A1 AU
     2003-268489 20030905
FDT  AU 2003268489 A1 Based on WO 2004023098
PRAI US 2002-408662P      20020906; US 2003-655878       20030905
IC   ICM  C12Q001-48; G01N000-00
AB   WO2004023098 A UPAB: 20040505
     NOVELTY - Measuring transferase (T) enzymatic activity involves incubating
     first reaction mixture (R1) comprising (T), ATP, and (T) substrate to
     allow for (T) reaction to occur, contacting R1 with a reagent comprising
     (T) quenching agent, a luminogenic molecule and a
     bioluminescence-generating enzyme to form second reaction mixture (R2)
```

that is incubated to allow for bioluminescent reaction to occur; determining (T) activity by measuring luminescence of R2.

DETAILED DESCRIPTION - Measuring (M1) transferase (T) enzymatic activity involves providing a reagent (I) comprising a transferase **quenching** agent, a luminogenic molecule and a bioluminescence-generating enzyme, where the (T) **quenching** agent selectively stops (T) activity without substantially affecting bioluminescent enzyme activity, incubating a first reaction mixture comprising a (T), ATP, and a (T) substrate for a first predetermined time period under conditions effective to allow for a (T) reaction to occur, contacting the first reaction mixture with the reagent to form a second reaction mixture and incubating the second reaction mixture for a second predetermined time period under conditions effective to allow for a bioluminescent reaction to occur, and determining (T) activity by measuring luminescence of the second reaction mixture.

An INDEPENDENT CLAIM is also included for a kit for measuring (T) enzymatic activity comprising a reconstitution buffer solution comprising one or more (T) **quenching** agents, where the (T) **quenching** agent selectively stops (T) activity without substantially affecting bioluminescent-generating enzyme activity, a composition comprising a luminogenic molecule and a bioluminescence-generating enzyme, and directions for using the kit.

USE - (M1) is useful for measuring (T) enzymatic activity such as kinase activity or ion channel/pump activity. Preferably, the method is useful for measuring (T) enzymatic activity such as protein kinase activity, lipid kinase activity, polynucleotide kinase activity, or sugar kinase activity. The protein kinase comprises a Ser/Thr protein kinase, a protein tyrosine kinase, or a protein lipid-dependent kinase. The Ser/Thr protein kinase comprises cAMP-dependent protein kinase (PKA), calcium and phospholipid-dependent protein kinase (PKC), cGMP-dependent protein kinase (PKG), calcium and calmodulin dependent protein kinase (CaM KII) or a dual specificity protein kinase. The dual specificity protein kinase comprises mitogen activated protein kinase (MAPK) or MAPK kinase (MEK). The tyrosine kinase comprises Rous sarcoma related protein kinases (Src), or Src family protein tyrosine kinases such as Src, Lck, Fyn, or Lyn. The growth factor receptors comprise epidermal growth factor receptor (EGFR), platelet derived growth factor receptor (PDGFR), or steel growth factor receptor (c-KIT). The lipid dependent protein kinases comprises Type I phosphoinositide 3-OH phosphotidylinositol kinase (PI3K). (M1) is useful for screening a compound for its effect on (T) enzymatic activity which involves providing a compound for screening; providing (I); incubating R1 comprising (T), ATP, (T) substrate, and the compound to allow for a (T) reaction to occur; contacting R1 with (I) to form R2 which is incubated to allow for bioluminescent reaction to occur; and determining the effect of the compound on (T) activity by measuring and comparing luminescence of R2 relative to a control mixture having no compound. (M1) is also useful in a high throughput method for rapidly screening several compounds to determine their effect on (T) enzymatic activity which involves providing several compounds for screening; providing (I); incubating several R1 each of which comprises (T), ATP, (T) substrate, and at least one compound to allow for (T) reactions to occur; contacting several R1 with (I) to form several R2 which are incubated to allow for bioluminescent reactions to occur; and determining the effect of the compounds on (T) activity by measuring and comparing luminescence of second reaction mixtures relative to at least one control mixture having no compound. The compound enhances or inhibits (T) enzymatic activity (all claimed). The method is homogeneous and can be used for a wide variety of transferases such as protein kinases and lipid kinases and substrates such as amino acids, peptides, proteins, sugars and lipids.

ADVANTAGE - The method is homogeneous, fast, sensitive, simple and non-radioactive. The methods are convenient and can be used with any instrumentation platform. The reagents required can be designed with relative ease and may be synthesized readily. The methods provide assays with fast development time and low cost. The kinase activity detection methods can be performed in a single well in a multi-well plate, making them suitable for use as high throughput screening methods. The method may

be optimized by altering the amounts of ATP and kinase substrate. In addition, increasing the reaction temperature may improve kinase activity. The method can be utilized to detect kinase activity over a wide range of ATP concentrations, generally from 1-100 micro M of ATP. The method may be used to detect kinase activity at low concentration levels of ATP, generally below 5 micro M of ATP, more preferably in the range of 1-3 micro M of ATP. This method can be used to measure a distinct end-point of a kinase reaction. The reagent composition allows, in a single step, for the simultaneous **quenching** or termination of transferase activity and generation of a luminescent signal that is directly proportional to the amount of ATP present. The reagent is robust and resulting luminescence is much less susceptible to interference by library compounds than other luciferase-based ATP detection reagents. In addition, the reagent composition facilitates measurement of transferase activity in a single sample over a long period of time as well as measurement of transferase activity in many samples in a high throughput format over a long period of time, thus eliminating the need for luminometers with reagent injectors and allowing for batch-mode processing of multiple samples.

Dwg.0/8

FS CPI EPI

FA AB; DCN

MC CPI: B01-D02; B02-S; B04-L03C; B04-L04; B05-A01B; B05-C07; **B06-F01** ; B10-A02; B10-A09A; B10-B01B; **B11-C07B3**; B11-C08E3; B12-K04; D05-H09

EPI: S03-E04E; S03-E14H

=> d all l43 tot

L43 ANSWER 1 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN **1997-402629** [37] WPIX

DNN N1997-334820 DNC C1997-129966

TI Fluorescently detecting reagent in sample - used to detect enzymes such as hydrolytic enzymes, peptidase(s), phosphorylase(s), oxidase(s) and reductase(s).

DC B04 D16 S03

IN LEE, L G

PA (BIOM-N) BIOMETRIC IMAGING INC

CYC 74

PI WO 9728277 A1 19970807 (199737)* EN 34 C12Q001-37

RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN

AU 9722540 A 19970822 (199801) C12Q001-37

US 5795729 A 19980818 (199840) C12Q001-37

ADT WO 9728277 A1 WO 1997-US1626 19970204; AU 9722540 A AU 1997-22540 19970204, WO 1997-US1626 19970204; US 5795729 A US 1996-597018 19960205

FDT AU 9722540 A Based on WO 9728277

PRAI US 1996-597018 19960205

REP US 4910300; US 5470705

IC ICM C12Q001-37

ICS C07H021-04; C12Q001-00; C12Q001-26; C12Q001-34; C12Q001-42; **G01N033-53**

AB WO 9728277 A UPAB: 19970915

Fluorescently detecting a reagent (R) in a sample comprises: (a) contacting a fluorescent probe (FP) including a reporter molecule (RM) and a **quencher** molecule (QM) with a sample containing R, the QM being converted by R from a first state which **quenches** the fluorescence of RM to a second state which has reduced ability to **quench** the RM; and (b) monitoring the fluorescence intensity of RM as the QM is converted by R. Also claimed are: (A) a method for fluorescently monitoring the generation of R in a chemical process

comprising: (i) introducing FP as above into a vessel in which a chemical process is performed; (ii) performing the chemical process in which QM is converted to the second state; and (iii) monitoring the fluorescence intensity of RM using the reaction; and (B) a fluorescent probe comprising a fluorescent RM and a QM as above.

USE - The probes are used to detect enzymes such as hydrolytic enzymes, peptidases, phosphorylases, oxidases and reductases.

Dwg.0/4

FS CPI EPI
FA AB; DCN
MC CPI: B04-L01; B04-L03; B04-L05; **B06-F04**; B10-A06; **B11-C07B3**; B12-K04; D05-A02C; D05-H09
EPI: S03-E06D; **S03-E14H4**

L43 ANSWER 2 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1992-283976** [34] WPIX
DNN N1992-217331 DNC C1992-126345
TI New ion selective fluorogenic reagents - for selective and direct determn. of ions, e.g. potassium, sodium or lithium, in biological samples.
DC B02 B04 E13 J04 S03
IN HAMMOND, G S; LUCAS, M E; MASILAMANI, D
PA (ALLC) ALLIED-SIGNAL INC
CYC 1
PI US 5136033 A 19920804 (199234)* 21 C07D419-02
ADT US 5136033 A US 1987-88370 19870824
PRAI US 1987-88370 19870824
IC ICM C07D419-02
ICS C07D321-00; G01N033-20
AB US 5136033 A UPAB: 19931025
An ionophore cpd. of an ion-recognising system fused to a signal moiety through 2 heteroatoms having a non-bonded electron pair having formula (I) is claimed. In (I), the signal moiety is an opt. substd. coumarin; the ion-recognising system is a crown ether (CE) in which X1, X2 of the CE are S, P, N, O or Se; Y1, Y2 are O, N, S or C; and m is 0-12.

USE/ADVANTAGE - The fluorogenic ionophores selectively bind ions such as K, Na and Li ions even in neutral aqueous and alcoholic media, and respond to such binding by fluorescence **quenching** or enhancement. They can be used for the selective and direct determn. of ions in biological or environmental samples. They can also be used in fibre optic-based sensors for the continuous in-vivo or in-vitro monitoring of ions in the blood or other fluids.

1/8

Dwg.1/8

FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-B04D5; B05-A01A; **B05-B01D**; B05-B01E; B06-H; **B11-C07B3**; B12-K04A; E05-G01; E05-K; E06-A03; E06-H; J04-B01B
EPI: S03-E04D; **S03-E14H1**; **S03-E14H9**

L43 ANSWER 3 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1992-268788** [32] WPIX
CR 1992-183806 [22]
DNN N1992-205557 DNC C1992-119926
TI Multilayer blood culture sensor - comprises pH sensitive absorbence based dye and pH insensitive fluorescence dye in spectrally coupled matrices.
DC A96 B04 D16 S03
IN BASCOMB, S; BOBOLIS, J; MORRIS, R J; OLSEN, C S; SHERMAN, D; BASCOMB, S D; OLSON, C S; SAND, T; SWENSON, F J
PA (BAXT) BAXTER DIAGNOSTICS INC; (DADE-N) DADE MICROSCAN INC; (BAXT) BAXTER INT INC; (ARJO) ARJO WIGGINS SA; (DADE-N) DADE INT INC
CYC 20
PI WO 9212413 A1 19920723 (199232)* EN 24 G01N021-64
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE
W: AU CA JP KR NO
AU 9212638 A 19920817 (199245) G01N021-64
EP 519066 A1 19921223 (199252) EN 24

R: BE DE ES FR GB IT SE

NO 9203436	A	19920903 (199301)		G01N000-00	
JP 05504263	W	19930708 (199332)	8	C12Q001-06	
AU 652423	B	19940825 (199436)		G01N021-80	
US 5372784	A	19941213 (199504)	12	G01N021-76	<--
EP 519066	A4	19930818 (199527)		G01N021-64	
US 5565328	A	19961015 (199647)	6	C12Q001-26	

ADT WO 9212413 A1 WO 1991-US9716 19911223; AU 9212638 A WO 1991-US9716 19911223, AU 1992-12638 19911223; EP 519066 A1 WO 1991-US9716 19911223, EP 1992-904836 19911223; NO 9203436 A WO 1991-US9716 19911223, NO 1992-3436 19920903; JP 05504263 W WO 1991-US9716 19911223, JP 1992-505272 19911223; AU 652423 B AU 1992-12638 19911223; US 5372784 A CIP of US 1988-238710 19880831, CIP of US 1990-609278 19901105, Cont of US 1991-638481 19910104, US 1994-212674 19940311; EP 519066 A4 EP 1992-904836 ; US 5565328 A Cont of US 1988-238710 19880831, Cont of US 1992-895149 19920605, Cont of US 1993-16654 19930209, Cont of US 1993-174613 19931228, Cont of US 1995-431194 19950427, US 1995-579089 19951227

FDT AU 9212638 A Based on WO 9212413; EP 519066 A1 Based on WO 9212413; JP 05504263 W Based on WO 9212413; AU 652423 B Previous Publ. AU 9212638, Based on WO 9212413; US 5372784 A CIP of US 5173434

PRAI US 1991-638481 19910104; US 1988-238710 19880831;
US 1990-609278 19901105; US 1994-212674 19940311

REP US 4231754; US 4803049; US 4851195; US 4867919; US 4945060; EP 214768; EP 283116; EP 352610; US 4822746

IC ICM C12Q001-06; C12Q001-26; G01N000-00; G01N021-64; **G01N021-76**; G01N021-80
ICS C12Q001-08; G01N021-78; **G01N033-52**; H01L021-306

AB WO 9212413 A UPAB: 19960322

Multilayer blood culture sensor comprises (a) a pH sensitive absorbance based dye (I) encapsulated in (or isolated by) a first light transmissive, gas permeable, proton impermeable matrix and (b) a pH insensitive fluorescence dye in an inert light-transparent matrix, the first and second matrices being spectrally coupled. (I) may be e.g. xylenol blue or bromothymol blue. (II) may be e.g. Rhodamine B or Rhodamine 101. Matrices may be silicone or acrylic matrices.

USE/ADVANTAGE - Change in fluorescence of the fluorophone can be related to the intensity of colour in a reaction and consequently related to the quantity of a substance of interest. Sensor is used partic. to detect or determine the concentration of microorganisms in a body fluid.

In an example, Wacker (RTM) silicone elastomer 3601 part A was mixed with Wacker (RTM) 3601 catalyst part B in a 9:1 ratio. 5% w/w of a 50mM xylenol blue solution dissolved in 5 mM borate buffer pH 1.1 containing 1% Tween (RTM) 80 was added to the silicone and homogenised. Mixture was then poured into an Al square mould to a thickness of 30/1000 of an inch and cured at 55 deg.C for 2 hrs. Wacker (RTM) silicone was prepared as previously and 2% w/w of 7.5 mM Rhodamine 101 in 50 mM Tris-HCl buffer pH 8.5 in 95% ethylene glycol was added to the silicone. Mixture was poured over the previously cured xylenol blue layer and cured at 55 deg.C overnight. This cured, dehydrated double layer sensor consisted of 2 distinct layers each 30/1000 of an inch thick. Disks were then punched out of the mould and adhered onto the base of bottles using more silicone, with the absorbance layer face down. The bottles were cured at 55 deg.C for 15 mins., rehydrated with normal saline and autoclaved. Saline was replaced with growth media and the bottles inoculated with E. coli. As the concentration of CO2 increased in the blood culture bottle, the absorbance of the xylenol blue decreased, allowing more light to reach the Rhodamine 101 to thus increase the amount of fluorescence emitted at 590 nm. This increase in fluorescence intensity was correlated with the culture growth.

1/5

Dwg.1/5

Dwg.1/5

FS CPI EPI

FA AB; GI; DCN

MC CPI: A12-V03C2; A12-W05; B04-B04D5; B06-A03; B10-E02; B11-C08E; B12-K04A4; D05-H09
EPI: S03-B01X; S03-E04D; **S03-E14H1**

L43 ANSWER 4 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1991-369266** [50] WPIX
CR 1991-333946 [46]; 1994-026235 [03]; 1997-013704 [02]
DNN N1991-282628 DNC C1991-159221
TI Specific binding assay, especially for nucleic acids - based on **quenching** of fluorescence of solid support by label-derived coloured prod..
DC A89 B04 D16 S03
IN VAN, NESS J; VANNESS, J
PA (MICR-N) MICROPROBE CORP; (VNES-I) VAN NESS J
CYC 15
PI WO 9118116 A 19911128 (199150)*
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE
W: JP
US 5232830 A 19930803 (199332) 9 C12Q001-68
ADT US 5232830 A CIP of US 1990-522442 19900511, US 1990-558967 19900726
PRAI US 1990-558967 19900726; US 1990-522442 19900511
REP US 4486539; US 4563419; US 4654300
IC C12N009-96; C12N015-00; C12Q001-68; G01N033-54
ICM C12Q001-68
ICS C12N009-96; C12N015-00; C12Q001-25; C12Q001-28; C12Q001-42; G01N033-54
AB WO 9118116 A UPAB: 19971030
Quantitating a target member of a ligand pair, comprises contacting a target member of the ligand pair with a capture member of the ligand pair. Capture member is immobilsed on a solid support having intrinsic fluoresence, and colorimetric reporter is associated with the target member; reacting the colorimetric reporter under conditions sufficient to produce a coloured prod; irradiating the solid support under conditions adequate to produce solid support fluorescence in the absence of the colour prods; measuring the resultant fluoresence of the solid support; and determining the amount of fluoresence **quenching**, quantitating the target member of the ligand pair. @(27pp Dwg.No.0/0)
FS CPI EPI
FA AB; DCN
MC CPI: A05-F01E; A12-V03C2; A12-W11L; B04-B02B1; B04-B02C2; B04-B04A1; B04-B04A6; B04-C03D; B05-C08; **B06-F01**; **B06-F03**; B10-A14; B10-E02; **B11-C07B3**; B12-K04; D05-H09; D05-H12
EPI: S03-E04D; **S03-E14H4**

L43 ANSWER 5 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1991-194806** [27] WPIX
DNN N1991-149159 DNC C1991-084279
TI Determining phagocytosis activity and opsonisation capacity in blood - by incubation with fluorescently labelled bacteria, **quenching**, lysing erythrocytes, adding DNA dye, then measuring fluorescence.
DC B04 D16 S03
IN NEBE, T C
PA (ORPE-N) ORPEGEN MED MOLEKUL; (ORPE-N) ORPEGEN MEDIZINISCH MOLEKULARBIOLOG
CYC 14
PI EP 435226 A 19910703 (199127)*
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 4014393 A 19910704 (199128)
ES 2023631 A 19920201 (199210)
EP 435226 B1 19950524 (199525) GE 9 C12Q001-02
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 59009136 G 19950629 (199531) C12Q001-02
ES 2023631 T3 19950816 (199539) C12Q001-02
ADT EP 435226 A EP 1990-125282 19901221; DE 4014393 A DE 1990-4014393 19900504; EP 435226 B1 EP 1990-125282 19901221; DE 59009136 G DE 1990-509136 19901221, EP 1990-125282 19901221; ES 2023631 T3 EP 1990-125282 19901221
FDT DE 59009136 G Based on EP 435226; ES 2023631 T3 Based on EP 435226
PRAI DE 1989-3943325 19891229; DE 1990-4014393 19900504
REP 10Jnl.Ref; 3.Jnl.Ref

IC C12Q001-02; **G01N033-48**
ICM C12Q001-02
ICS C12Q001-10; C12Q001-14; **G01N033-48**
AB EP 435226 A UPAB: 19930928
Determination of phagocytosis activity (PA) in mammalian leucocytes comprises (1) treating a body fluid sample with a defined amount of fluorescently-labelled bacteria; (2) incubation, with shaking, at 30-40 deg.C for 5-60 mins; (3) cooling to stop phagocytosis; (4) adding a **quencher** to suppress fluorescence from non-phagocytised bacteria; (5) adding a salt solution which lyses erythrocytes in the sample; (6) adding a fluorescent DNA dye, and (7) measuring fluoroescence in a cytometer. Also new are reagent kits for this process.
E.coli, Staph. aureus and Pseudomonas aeruginosa are used as the bacteria, especially FITC (fluorescein isothiocyanate)-labelled E.coli.
USE/ADVANTAGE - The method is used to determine PA in whole blood, especially for detecting immune deficiency. The detection of PA in separate samples, containing opsonised and nonopsonised bacteria, allows estimation of opsonisation capacity (OC) of a body fluid. This method is simple and provides accurate and reproducible results.
0/0
FS CPI EPI
FA AB; DCN
MC CPI: B04-B02D1; B04-B04D1; B04-B04D5; B05-A01B; B06-D13; B10-A01; **B10-A09B**; **B11-C07B3**; B12-K04A; D05-H09
EPI: **S03-E14H**

L43 ANSWER 6 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1991-172824** [24] WPIX
DNN N1991-132426 DNC C1991-074631
TI Improving sensitivity of enzyme detection - comprises irradiating enzymatic reaction components containing free radical contaminants with light.
DC B04 D16 S03
IN VONKREISLE, A; KONDO, K; MOTSENBOCKER, M A
PA (TAKE) TAKEDA CHEM IND LTD
CYC 16
PI EP 431500 A 19910612 (199124)*
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
CA 2031401 A 19910605 (199133)
JP 03224497 A 19911003 (199146)
US 5168047 A 19921201 (199251) 11 C12Q001-28
ADT EP 431500 A EP 1990-123038 19901201; JP 03224497 A JP 1990-334972 19901129; US 5168047 A US 1990-619117 19901128
PRAI JP 1989-315028 19891204
REP EP 193895; GB 2095830
IC ICM C12Q001-28
ICS G01N021-62; **G01N021-76**; G01N033-58
AB EP 431500 A UPAB: 19930928
A method for improving the sensitivity of enzyme detection is claimed which comprises irradiating enzymatic reaction components containing free radical contaminants with light ranging from the ultraviolet through the visible light spectrum prior to the enzyme detection reaction. The enzyme may be e.g. horseradish peroxidase (HRP). The enzymatic reaction components may include a chemilumigenic components, e.g. luminol. The light irradiation may be conducted in the presence of a photosensitive substance, e.g. methylene blue, xanthine derivs. or flavin derivs.
USE/ADVANTAGE - The irradiation produces free radicals which remove interfering substances which **quench** free radicals and reduce the sensitivity of enzymatic detection. The improved method can be used for detecting enzymes and in diagnostic detection.
3/5
FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-A06; B04-B02C2; B06-D06; B06-D17; **B06-F04**; B11-C07B4; B11-C08E3; B12-K04A; D05-H09
EPI: S03-E04E; **S03-E14H4**

L43 ANSWER 7 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1989-145080** [19] WPIX
DNN N1989-110811 DNC C1989-064250
TI Liposomal thermograph for monitoring thermal history of goods - comprising a hermetically sealed sachet containing a bi-directional liposomal thermographic compsn..
DC B07 D13 D16 D22 G04 S03
PA (BRAM-I) BRAMHALL J S
CYC 1
PI US 4825447 A 19890425 (198919)* 11
ADT US 4825447 A US 1987-99115 19870921
PRAI US 1987-99115 19870921
IC G01K011-00
AB US 4825447 A UPAB: 19930923
A liposomal thermograph is claimed comprising (a) a hermetically sealed sachet and (b) a liposomal thermographic compsn. (I) which is bi-directional and contained within the sachet.
Pref. (I) comprises a liquid medium and liposomes containing a **quenched** fluorescent dye. The fluorescent dye is releasable from the liposomes upon lysis and becomes **unquenched** and fluorescent upon release.
USE/ADVANTAGE - (I) is bi-directional and is useful for detecting both positive and negative temperature transgressions. It is useful for monitoring the thermal history of biological materials which must be maintained in a chilled condition but which must not be allowed to freeze. Multiple liposomal thermographic compsns. having different freezing points and transition temps. can be used to generate a more nearly complete thermal history for the goods being monitored, e.g. foods, biochemicals, pharmaceuticals, biologicals, cultures, tissues or organs.
3,4/4
FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-B01B; B05-B01P; B06-A03; **B11-C07B3**; B12-M11F; D03-H02; G04-B09
EPI: S03-B01X; S03-E14A; **S03-E14H**

L43 ANSWER 8 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1983-47183K** [20] WPIX
DNN N1983-085008 DNC C1983-045776
TI Immunoassay for iodo thyronine in biological fluids - using cpd. containing two indirectly linked phenyl gps. one with substit. containing carboxylic gp., as blocking agent for thyroxine binding protein.
DC B04 J04 S03
IN ATKINSON, D C; CARRICO, R J; MORRIS, D L
PA (MILE) MILES LAB INC
CYC 19
PI EP 78477 A 19830511 (198320)* EN 44
R: AT BE CH DE FR GB IT LI LU NL SE
AU 8289640 A 19830512 (198326)
JP 58086461 A 19830524 (198326)
NO 8203658 A 19830530 (198328)
DK 8204886 A 19830704 (198333)
US 4468469 A 19840828 (198437)
ES 8500452 A 19850101 (198510)
IL 67020 A 19860131 (198610)
CA 1208547 A 19860729 (198635)
EP 78477 B 19860910 (198637) EN
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3273222 G 19861016 (198643)
JP 01033781 B 19890714 (198932)
ADT EP 78477 A EP 1982-109830 19821025; JP 58086461 A JP 1982-191954 19821102; US 4468469 A US 1982-414934 19820903
PRAI US 1981-318027 19811104; US 1982-414934 19820903
REP 1.Jnl.Ref; EP 51213; GB 1308327; No.SR-Pub; US 3911096; US 4046870
IC C12Q001-44; G01N033-78
AB EP 78477 A UPAB: 19930925

Immunoassay procedure for the determn. of an iodothyronine (I) in a biological fluid comprises use of a blocking agent of formula (II) for the binding of (I) to thyroxine-binding protein in the fluid.
Z1-Y-Z2 (I)
(Y is O, NH, S, CH2 or CO; and Z1 and Z2 are Ph, at least one being substd. by halogen, alkyl or alkoxy, and Z2 being substd. by COOH or SO3H).
Blocking agents (II) do not inhibit the catalytic activity of many enzymes at the concns. at which they are effective, and so they are useful in homogeneous competitive binding immunoassays in which the label is a participant in an enzymatic reaction. When (II) is especially fenclofenac, it is useful in homogeneous competitive binding immunoassays in which a spectrophotometric response is measured, as (II) does not interfere (there is no absorption at over 300 nm).
FS CPI EPI
FA AB
MC CPI: B04-B02D; B04-B04A; **B10-A09B**; B10-B02E; B10-C04B; B10-C04C; **B11-C07B**; B12-K04; J04-B01B
EPI: **S03-E14H4**

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L43 ANSWER 3 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ABEQ EP 519066 A UPAB: 19931006
Multilayer blood culture sensor comprises (a) a pH sensitive absorbence based dye (I) encapsulated in (or isolated by) a first light transmissive, gas permeable, proton impermeable matrix and (b) a pH insensitive fluorescence dye in an inert light-transparent matrix, the first and second matrices being spectrally coupled. (I) may be e.g. xylenol blue or bromothymol blue. (II) may be e.g. Rhodamine B or Rhodamine 101. Matrices may be silicone or acrylic matrices.
USE/ADVANTAGE - Change in fluorescence of the fluorophone can be related to the intensity of colour in a reaction and consequently related to the quantity of a substance of interest. Sensor is used partic. to detect or determine the concn. of microorganisms in a body fluid.
ABEQ JP 05504263 W UPAB: 19931118
Multilayer blood culture sensor comprises (a) a pH sensitive absorbance based dye (I) encapsulated in (or isolated by) a first light transmissive, gas permeable proton impermeable matrix and (b) a pH insensitive fluorescence dye in an inert light transparent matrix, the first and second matrices being spectrally coupled. (I) may be e.g. xylenol blue or bromothymol blue. (II) may be e.g. Rhodamine B or Rhodamine 101. Matrices may be silicone or acrylic matrices.
USE/ADVANTAGE - Change in fluorescence of the fluorophone can be related to the intensity of colour in a reaction and consequently related to the quantity of a substance of interest. Sensor is used partic. to detect or determine the concn. of microorganisms in a body fluid.
ABEQ US 5372784 A UPAB: 19950201
Multilayer sensor for determining the concn. or presence of a microorganism in a body fluid comprises a pH sensitive absorbence based dye encapsulated in a first light transmissive, gas permeable, proton-impermeable matrix, and a pH insensitive fluorescence dye encapsulated in an inert light transparent second matrix. The first and second matrices are spectrally coupled and in close proximity.
Pref. pH sensitive absorbence based dye is xylenol blue or bromothymol blue, and the fluorescence dye is rhodamine 101 or rhodamine B. The two matrices comprise silicone or acrylic.
USE - Determining the concn. or presence of microorganisms in body fluids e.g. to monitor microbial infections grown in a fluid culture bottle.
Dwg.1/5
ABEQ US 5565328 A UPAB: 19961124
Detecting indole produced by a bacterial isolate based on the **quenching** of the fluorescence of 8-methoxypyrene tri-sulphonic acid or esculin, comprises inoculating a bacterial isolate into a chamber

containing peptone and tryptophan; incubating 2 to 5 hours; adding at an acidic pH, dimethyl aminocinnamaldehyde containing 8-methoxypyrene tri-sulphonic acid or esculin, wherein the acidic pH is sufficiently low so that any indole would form a green-blue coloured product when reacted with dimethyl aminocinnamaldihyde; detecting with a fluorometric reader the extent of indole formation based on the **quenching** of fluorescence of the 8-methoxypyrene tri-sulphonic acid or esculin as a result of any green-blue product formed by the reaction of the indole and the dimethyl aminocinnamaldehyde.
Dwg.0/0

L43 ANSWER 5 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ABEQ EP 435226 B UPAB: 19950630
A method of determining the phagocytic activity of mammalian leucocytes, characterised in that a body fluid is mixed with a given amount of fluorescence-labelled bacterai, is incubated while being agitated for 5 to 60 minutes at a temperature of 30 to 40 deg.C, the phagocytosis is stopped by cooling, a **quenching** substance is added, the non-phagocytised bacteria present in the solution are suppressed it its fluorescence, a salt solution is added which causes the erythrocytes present in the sample solution to undergo lysis, a fluorescent DNA dye is added which has a different emission spectrum to the fluorescence-labelled bacteria and, subsequently, the fluorescence evaluated in a fluorescence cytometer.
Dwg.0/0

L43 ANSWER 8 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ABEQ EP 78477 B UPAB: 19930925
A homogeneous competitive binding immunoassay method for determining an iodothyronine in a sample of unextracted serum or plasma, wherein a reaction mixture is formed by combining said sample with reagents comprising an antibody to said iodothyronine, a labeled iodothyronine conjugate, and a TBP blocking agent, and wherein a spectrophotometric response, preferably a fluorescence emission or an absorbence change caused by an assay reaction, is generated in said reaction mixture at a wavelength greater than 300 nm which is related to the concentration of said iodothyronine in said sample, characterised in that as the TBP blocking agent is used a compound of the formula Z1-Y-Z2 wherein Y is O, NH, S, CH2 or C=O, and Z1 and Z2 represent phenyl groups at least one of which is substituted with one or more substituents selected from halogen, lower alkyl, and lower alkoxy, Z2 being substituted with a carboxyalkyl or a sulphoalkyl group.
ABEQ US 4468469 A UPAB: 19930925
Homogeneous competitive binding immunoassay method for iodothyronine (I) determn. in an unextracted serum or plasma sample is claimed. The sample is combined with an antibody to (I), a labelled (I) conjugate, and a TBP (thyroxine binding protein) blocking agent. A spectrophotometric response is generated in the reaction mixt. at a wavelength above 300 nm which is related to the (I) concn. of the sample.
The improvement comprises using, as the blocking agent, a cpd. of formula (II) or its salt. The cpd. has no absorption at wavelengths above 300 nm.
ADVANTAGE - **Quenching** of fluorescence emission and inhibition of the catalytic acitivty of enzymes are avoided. (II) is esp. 'Fenclofenac' (II:Y=O, R1=Cl) or 'diclofenac' (II:Y=NH, R2=Cl).

=> d kwic l43 2 3 8

L43 ANSWER 2 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1992-283976** [34] WPIX
AB . . .
as K, Na and Li ions even in neutral aqueous and alcoholic media, and respond to such binding by fluorescence **quenching** or enhancement. They can be used for the selective and direct determn. of ions in biological or environmental samples. They. . .
MC CPI: B04-B04D5; B05-A01A; **B05-B01D**; B05-B01E; B06-H; **B11-C07B3**; B12-K04A; E05-G01; E05-K; E06-A03; E06-H; J04-B01B

EPI: S03-E04D; **S03-E14H1; S03-E14H9**
M1 *02* M423 M760 M903 N102 Q435 V600 V615
M1 *04* B615 **B634** B744 B833 B834 B840 D011 D013 D014 D240 D350
D510 G014 G015 G016 G030 G100 G563 H100 H101 H121 H122. . .
M2 . . . A111 A119 A940 A960 C710 C730 M411 M417 M750 M903 M904 N102
Q435
DCN: R04810-A; R04811-A; R07763-A
M2 *03* B615 **B634** B744 B831 B834 B840 D011 D013 D014 D240 D350
D510 G014 G015 G016 G030 G100 G563 H100 H101 H121 H122. . .
M3 . . . A111 A119 A940 A960 C710 C730 M411 M417 M750 M903 M904 N102
Q435
DCN: R04810-A; R04811-A; R07763-A
M3 *03* B615 **B634** B744 B831 B834 B840 D011 D013 D014 D240 D350
D510 G014 G015 G016 G030 G100 G563 H100 H101 H121 H122. . .

L43 ANSWER 3 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1992-268788** [32] WPIX
PI WO 9212413 A1 19920723 (199232)* EN 24 G01N021-64
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE
W: AU CA JP KR NO
AU 9212638 A 19920817 (199245) G01N021-64
EP 519066 A1 19921223 (199252) EN 24
R: BE DE ES FR GB IT SE
NO 9203436 A 19920903 (199301) G01N000-00
JP 05504263 W 19930708 (199332) 8 C12Q001-06
AU 652423 B 19940825 (199436) G01N021-80
US 5372784 A 19941213 (199504) 12 G01N021-76 <--
EP 519066 A4 19930818 (199527) G01N021-64
US 5565328 A 19961015 (199647) 6 C12Q001-26
ADT WO 9212413 A1 WO 1991-US9716 19911223; AU 9212638 A WO 1991-US9716 19911223, AU 1992-12638 19911223; EP 519066 A1 WO 1991-US9716 19911223, EP 1992-904836 19911223; NO 9203436 A WO 1991-US9716 19911223, NO 1992-3436 19920903; JP 05504263 W WO 1991-US9716 19911223, JP 1992-505272 19911223; AU 652423 B AU 1992-12638 19911223; US 5372784 A CIP of US 1988-238710 19880831, CIP of US 1990-609278 19901105, Cont of US 1991-638481 19910104, US 1994-212674 19940311; EP 519066 A4 EP 1992-904836 ; US 5565328 A Cont of US 1988-238710 19880831, Cont of US 1992-895149 19920605, Cont of US 1993-16654 19930209, Cont of US 1993-174613 19931228, Cont of US 1995-431194 19950427, US 1995-579089 19951227
FDT AU 9212638 A Based on WO 9212413; EP 519066 A1 Based on WO 9212413; JP 05504263 W Based on WO 9212413; AU 652423 B Previous Publ. AU 9212638, Based on WO 9212413; US 5372784 A CIP of US 5173434
PRAI US 1991-638481 19910104; US 1988-238710 19880831;
US 1990-609278 19901105; US 1994-212674 19940311
IC ICM C12Q001-06; C12Q001-26; G01N000-00; G01N021-64; **G01N021-76**;
G01N021-80
IC ICS C12Q001-08; G01N021-78; **G01N033-52**; H01L021-306
ABEQ US 5565328 UPAB: 19961124
Detecting indole produced by a bacterial isolate based on the **quenching** of the fluorescence of 8-methoxypyrene tri-sulphonic acid or esculin, comprises inoculating a bacterial isolate into a chamber containing peptone and. . . coloured product when reacted with dimethyl aminocinnamaldihyde; detecting with a fluorometric reader the extent of indole formation based on the **quenching** of fluorescence of the 8-methoxypyrene tri-sulphonic acid or esculin as a result of any green-blue product formed by the reaction. . .
MC CPI: A12-V03C2; A12-W05; B04-B04D5; B06-A03; B10-E02; B11-C08E; B12-K04A4; D05-H09
EPI: S03-B01X; S03-E04D; **S03-E14H1**
M1 . . . M510 M520 M530 M540 M740 M782 M903 M904 M910 N102 N120 Q233
V0 V742
DCN: R00446-M; R00446-Q
M1 *09* B414 **B713** B720 B744 B796 B799 B833 M210 M211 M250 M283
M320 M423 M424 M430 M510 M520 M530 M540 M620 M740 M782. . .

L43 ANSWER 8 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1983-47183K [20] WPIX
ABEQ. . .
cpd. of formula (II) or its salt. The cpd. has no absorption at wavelengths above 300 nm.
ADVANTAGE - **Quenching** of fluorescence emission and inhibition of the catalytic acitivty of enzymes are avoided. (II) is esp. 'Fenclofenac' (II:Y=O, R1=Cl) or. . .
MC CPI: B04-B02D; B04-B04A; **B10-A09B**; B10-B02E; B10-C04B; B10-C04C; **B11-C07B**; B12-K04; J04-B01B
EPI: **S03-E14H4**
M2 . . . M343 M349 M371 M373 M391 M412 M417 M430 M511 M521 M532 M540 M782 M903 P831 Q505
M2 *07* B615 B701 **B713** B720 B793 B815 B831 D012 D013 D022 D120 G015 G017 G019 G100 H4 H401 H402 H441 H481 H5 H541 H6. . . M342 M343 M349 M371 M383 M391 M411 M430 M511 M520 M532 M540 M782 M903 P831 Q505
M2 *08* B615 B702 **B713** B720 B797 B815 B832 D011 D013 D019 D023 D931 E270 F012 F013 F014 F015 F113 G015 G017 G019 G100 H1. . .
M2 . . . M343 M349 M371 M373 M391 M412 M417 M430 M511 M521 M532 M540 M782 M903 P831 Q505
M2 *07* B615 B701 **B713** B720 B793 B815 B831 D012 D013 D022 D120 G015 G017 G019 G100 H4 H401 H402 H441 H481 H5 H541 H6. . . M342 M343 M349 M371 M383 M391 M411 M430 M511 M520 M532 M540 M782 M903 P831 Q505
M2 *08* B615 B702 **B713** B720 B797 B815 B832 D011 D013 D019 D023 D931 E270 F012 F013 F014 F015 F113 G015 G017 G019 G100 H1. . .

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FILE LAST UPDATED: 25 May 2005 (20050525/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all l54 tot

L54 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:546582 HCAPLUS
DN 141:101088
ED Entered STN: 08 Jul 2004
TI Methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein
IN Carter, Richard; Rosenburg, Martin; Gentry, Daniel R.; Grinter, Nigel
PA **Promega** Corporation, USA
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DT Patent

LA English
IC ICM C12Q
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 7, 9
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004057016	A2	20040708	WO 2003-US41097	20031219
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2004229242	A1	20041118	US 2003-742355	20031218
PRAI	US 2002-435136P	P	20021219		
	US 2003-742355	A	20031218		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004057016	ICM	C12Q
US 2004229242	NCL	435/006.000

AB Methods for specific RNA capture, detection and quantification are presented utilizing a protein that selectively binds RNA:DNA hybrids, preferably an RNase H that is modified to reduce degradation of the nucleic acid mols. and enhance specific detection of mixed RNA:DNA nucleic acid hybrids. Labeling of the RNA and/or amplification is not required to perform these methods. Modified RNase H enzymes useful in such methods are disclosed. An optimal RNase H variant comprises the substitutions D94G, D134A, and at least two of sixteen other sequence substitutions, and fused to a peptide motif for modification by biotin ligase and phosphorylation by cAMP-dependent protein kinase.

ST RNA capture detection quantification DNA hybrid; mRNA capture detection quantification DNA hybrid; RNase H mutagenesis RNA capture detection

IT Proteins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(RNA:DNA hybrid-binding; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Escherichia coli
(RNase H from; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT DNA sequences
(for RNase H muteins from Escherichia coli; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Fluorescent indicators
(hybrid-binding protein label; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT **Fluorescence quenching**
Nucleic acid hybridization
Surface plasmon resonance
(methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT RNA
mRNA
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods of capturing, detecting and quantifying RNA:DNA hybrids and a

modified RNase H useful therein)
IT Mutagenesis
Protein engineering
(of RNase H from Escherichia coli; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT Protein sequences
(of RNase H muteins from Escherichia coli; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT **Immunoassay**
(of bound protein; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT **DNA microarray technology**
(solid support; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT Imaging
(surface plasmon resonance; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 9026-81-7, Nuclease 9068-38-6, Reverse transcriptase 433935-36-5, Polymerase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(RNA:DNA hybrid-binding; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 9050-76-4P, RNase H
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(RNA:DNA hybrid-binding; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 717607-05-1DP, variants 717607-06-2P 717607-07-3P 717607-08-4P 717607-09-5P
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 9001-78-9, Alkaline phosphatase 9014-00-0, Luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(hybrid-binding protein label; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT 717607-10-8 717607-11-9
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)
IT **717129-21-0** 717607-16-4 717607-17-5 717607-18-6
717607-19-7 717607-20-0 717607-21-1 717607-22-2
RL: PRP (Properties)
(unclaimed sequence; methods of capturing, detecting and quantifying RNA,DNA hybrids and a modified RNase H useful therein)
IT 50864-51-2, Single-strand-specific exonuclease
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(unhybridized nucleic acid digestion by; methods of capturing, detecting and quantifying RNA:DNA hybrids and a modified RNase H useful therein)

L54 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:924094 HCAPLUS
DN 136:50649
ED Entered STN: 21 Dec 2001
TI Method for increasing luminescence assay sensitivity
IN **Hawkins, Erika; Centanni, John M.; Sankbeil, Jacqueline; Wood, Keith V.**
PA **Promega Corporation, USA**
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2

DT Patent
LA English
IC ICM G01N033-48
CC 9-5 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001096862	A2	20011220	WO 2001-US18363	20010607
	WO 2001096862	A3	20020718		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2411179	AA	20011220	CA 2001-2411179	20010607
	EP 1297337	A2	20030402	EP 2001-942027	20010607
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004503777	T2	20040205	JP 2002-510941	20010607
	US 2004096924	A1	20040520	US 2003-692587	20031024
PRAI	US 2000-590884	A	20000609		
	WO 2001-US18363	W	20010607		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001096862	ICM	G01N033-48
WO 2001096862	ECLA	G01N033/58D
JP 2004503777	FTERM	2G054/AA06; 2G054/EA01; 2G054/EA02; 4B063/QA20; 4B063/QQ61; 4B063/QQ91; 4B063/QR02; 4B063/QR58; 4B063/QS26; 4B063/QS36; 4B063/QX02
US 2004096924	NCL	435/008.000
	ECLA	G01N033/58D

AB A method for increasing the sensitivity of a luminescent assay comprising carrying out the assay in the presence of an organic compound that reduces luminescence that is not dependent on the presence of an analyte by at least about 10 fold, and that reduces luminescence that is dependent on the presence of an analyte by less than about 7 fold.

ST luminescence assay
IT Luminescence
(Autoluminescence; method for increasing luminescence assay sensitivity)
IT Enzymes, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Luminescent; method for increasing luminescence assay sensitivity)
IT Molecules
(Luminogenic; method for increasing luminescence assay sensitivity)
IT Enzymes, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Luminogenic; method for increasing luminescence assay sensitivity)
IT Proteins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Obelins; method for increasing luminescence assay sensitivity)
IT Buffers
Cell
Concentration (condition)
Containers
Detergents
Luminescence
Luminescence quenching
Luminescence spectroscopy
Oxidation
Packaging materials

Solutions
Solvents
Test kits
Weight
pH
(method for increasing luminescence assay sensitivity)

IT Aequorins
Enzymes, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for increasing luminescence assay sensitivity)

IT Gelatins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing luminescence assay sensitivity)

IT Organic compounds, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing luminescence assay sensitivity)

IT Albumins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(serum, bovine; method for increasing luminescence assay sensitivity)

IT 56-65-5, 5'-ATP, uses 521-31-3, Luminol **2591-17-5**, Beetle luciferin 9001-78-9, Alkaline phosphatase 9014-00-0, Luciferase 61869-41-8, Renilla luciferase 61969-99-1, Cypridina luciferase 61970-00-1, Firefly luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for increasing luminescence assay sensitivity)

IT **62-56-6**, Thiourea, analysis **67-68-5**, DMSO, analysis **105-81-7**, 1-Allyl-3-(2-hydroxyethyl)-2-thiourea **3180-51-6**, 6-Azathiothymidine 7722-84-1, Hydrogen peroxide, analysis 7732-18-5, Water, analysis **7775-14-6**, Sodium hydrosulfite 9005-64-5, Tween 20 55779-48-1, Coelenterazine 71833-44-8, Zwittergent
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing luminescence assay sensitivity)

L54 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:696884 HCAPLUS
DN 127:356759
ED Entered STN: 05 Nov 1997
TI Novel reagent, method, and kit for the quantitation of oxidation-reduction phenomena in proteins and peptides
IN Shultz, John W.; Selman, Susanne; Simpson, Daniel J.
PA **Promega** Corporation, USA
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-26
ICS C07D271-12; C07D413-12; G01N031-22
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 79, 80
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9739141	A1	19971023	WO 1997-US6152	19970414
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5952186	A	19990914	US 1996-631892	19960414
AU 9726673	A1	19971107	AU 1997-26673	19970414
EP 900284	A1	19990310	EP 1997-918605	19970414
R: CH, DE, ES, FR, GB, IT, LI				
PRAI US 1996-631892	A	19960414		

WO 1997-US6152 W 19970414

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9739141	ICM	C12Q001-26
	ICS	C07D271-12; C07D413-12; G01N031-22
WO 9739141	ECLA	C07D271/12; C07D413/12+339+271; C12Q001/26; G01N031/22
US 5952186	NCL	435/007.900; 435/004.000; 435/113.000; 436/120.000; 548/126.000
	ECLA	C07D271/12; C07D413/12+339+271; C12Q001/26; G01N031/22

AB A first embodiment of the method is for analyzing the amount of methionine sulfoxide in a protein sample and includes the steps of contacting a protein solution with methionine sulfoxide reductase in the presence of a reducing reagent bearing a covalently-linked reporter tag, whereby the reducing reagent is oxidized. The oxidized reducing reagent formed, which is proportional to the amount of methionine sulfoxide in the sample, is then quantified. A second embodiment of the method is for analyzing the amount of disulfide linkages in a polypeptide or protein sample. It proceeds in the same fashion as above, but in the absence of any enzyme. A novel fluorescently-labeled reducing agent and kits to practice the method are also disclosed.

ST protein methionine sulfoxide disulfide bond detn; reductase methionine sulfoxide detn peptide protein

IT Proteins, specific or class
RL: AMX (Analytical matrix); ANST (Analytical study).
(disulfide-containing; methionine sulfoxide and disulfide bonds determination in proteins)

IT Metals, analysis
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(divalent; methionine sulfoxide and disulfide bonds determination in proteins)

IT Disulfide group
Fluorescence quenching
Fluorescent substances
Molecular cloning
Test kits
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Peptides, analysis
RL: AMX (Analytical matrix); ANST (Analytical study)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Metals, analysis
RL: ANT (Analyte); ANST (Analytical study)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Salts, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Thioredoxins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(methionine sulfoxide reductase-encoding; methionine sulfoxide and disulfide bonds determination in proteins)

IT Proteins, specific or class
RL: AMX (Analytical matrix); ANST (Analytical study)
(methionine sulfoxide-containing; methionine sulfoxide and disulfide bonds determination in proteins)

IT **62697-73-8P**, Methionine sulfoxide
RL: ANT (Analyte); PUR (Purification or recovery); RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **60-24-2**, β-Mercaptoethanol 79-08-3, Bromoacetic acid 128-53-0 7447-39-4, Cupric chloride, uses 7646-79-9, Cobaltous chloride, uses 7646-85-7, Zinc chloride (ZnCl2), uses 7647-17-8, Cesium chloride, uses 7705-08-0, Ferric chloride, uses 7758-98-7

, Copper sulfate, uses **7785-87-7**, Manganese sulfate 7786-30-3,
Magnesium chloride, uses **7786-81-4**, Nickel sulfate 7791-11-9,
Rubidium chloride, uses 10043-52-4, Calcium chloride (CaCl2), uses
78206-57-2, Peptide Methionine sulfoxide reductase **198404-42-1D**,
derivs. 198504-82-4 198504-83-5
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **3483-12-3**, Dithiothreitol
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study);
RACT (Reactant or reagent); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **198404-38-5P 198404-39-6P**
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST
(Analytical study); PREP (Preparation); USES (Uses)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **63-68-3**, L-Methionine, reactions **14193-38-5**,
trans-1,2-Dithiane-4,5-diol 88235-25-0 145195-58-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(methionine sulfoxide and disulfide bonds determination in proteins)

IT **198404-40-9P 198404-41-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(methionine sulfoxide and disulfide bonds determination in proteins)

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L59 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **2001:817223** HCAPLUS
DN 135:341179
ED Entered STN: 09 Nov 2001
TI Method for determining drug-serum protein binding
IN Ramanathan, Murali; Morris, Marilyn E.
PA The Research Foundation of State University of New York, USA
SO U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C12Q001-00
ICS G01N033-53; C12Q001-48; C12Q001-52; C12P019-38; C12P019-40;
C12P007-10; C12P005-00; C12N001-00
INCL 435004000
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 1
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2001039005	A1	20011108	US 2001-767790	20010123 <--
US 6468757	B2	20021022		
PRAI US 2000-177936P	P	20000125 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2001039005	ICM	C12Q001-00
	ICS	G01N033-53; C12Q001-48; C12Q001-52; C12P019-38; C12P019-40; C12P007-10; C12P005-00; C12N001-00
	INCL	435004000
US 2001039005	NCL	435/007.100; 536/023.100
	ECLA	G01N033/542 <--

AB The present invention relates to a method of screening for drug binding to serum proteins by: preparing at least two solns. each including a concentration of a serum protein and a concentration of a candidate drug, wherein the concentration of the
candidate drug is different for each of the at least two solns.; exposing each of the at least two solns. to a light source; measuring fluorescent emission by the serum protein or a serum protein-candidate drug complex for each of the at least two solns. upon said exposing; and determining whether

a change in fluorescence emission is measured for an increased concentration of the candidate drug, wherein the change in fluorescence emission indicates binding of the candidate drug to the serum protein. A kit useful for performing a fluorimetric screening of drug binding to serum proteins is also disclosed. Various drugs were screened using human serum albumin and α1-acid glycoprotein as the serum proteins and determining tryptophan fluorescence.

ST drug serum protein binding fluorescence assay; albumin acid glycoprotein drug binding fluorometry

IT Albumins, biological studies
Glycoproteins, general, biological studies
Lipoproteins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(as serum proteins; method for determining drug-serum protein binding)

IT Proteins, general, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(blood; method for determining drug-serum protein binding)

IT α1-Acid glycoprotein
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(human, as serum proteins; method for determining drug-serum protein binding)

IT Blood plasma
Cuvettes
Dissociation constant
Drug screening
Drugs
Fluorescence quenching
Fluorometry
Pharmaceutical analysis
Test kits
(method for determining drug-serum protein binding)

IT Plates
(multiwell; method for determining drug-serum protein binding)

IT Albumins, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(serum, human, serum albumin, as serum proteins; method for determining drug-serum protein binding)

IT 67-68-5, DMSO, uses
RL: NUU (Other use, unclassified); USES (Uses)
(as solvent; method for determining drug-serum protein binding)

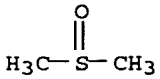
IT 50-33-9, Phenylbutazone, biological studies 54-21-7, Sodium salicylate 56-75-7, Chloramphenicol 57-96-5, Sulfinpyrazone 58-55-9, Theophylline, biological studies 69-09-0, Chlorpromazine hydrochloride 69-53-4, Ampicillin 96-84-4, Iophenoxic acid 103-90-2, Acetaminophen 113-52-0, Imipramine hydrochloride 129-06-6, Sodium warfarin 439-14-5, Diazepam 5543-79-3, Sodium (S)-warfarin 7447-41-8, Lithium chloride, biological studies 36508-91-5
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(method for determining drug-serum protein binding)

IT 60-18-4, Tyrosine, properties 73-22-3, Tryptophan, properties
RL: PRP (Properties)
(serum protein containing; method for determining drug-serum protein binding)

IT 67-68-5, DMSO, uses
RL: NUU (Other use, unclassified); USES (Uses)
(as solvent; method for determining drug-serum protein binding)

RN 67-68-5 HCAPLUS

CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



L59 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **2001:178382** HCAPLUS
DN 134:219359
ED Entered STN: 15 Mar 2001
TI Photon reducing agents and compositions for reducing undesirable light emission in fluorescence assays
IN Zlokarnik, Gregor; Negulescu, Paul; Knapp, Tom; Tsien, Roger Y.; Rink, Tim
PA Aurora Biosciences Corporation, USA
SO U.S., 39 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12Q001-70
ICS C12Q001-02; C12Q001-34; G01N033-542; B01L003-00
INCL 435007100
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 1, 41, 63, 73
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 6200762	B1	20010313	US 1998-118497	19980717	<--
	US 6214563	B1	20010410	US 1998-120516	19980721	<--
	US 6221612	B1	20010424	US 1998-122477	19980723	<--
	US 2001006820	A1	20010705	US 2001-759629	20010112	<--
PRAI	US 1997-54519P	P	19970801	<--		
	US 1998-122477	A1	19980723	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 6200762	ICM	C12Q001-70	
	ICS	C12Q001-02; C12Q001-34; G01N033-542; B01L003-00	
	INCL	435007100	
US 6200762	NCL	435/007.100; 422/082.050; 422/099.000; 427/102.000; 427/157.000; 427/213.340; 435/005.000; 435/006.000; 435/007.200; 435/007.210; 435/007.240; 435/007.500; 435/007.720; 435/091.100; 435/230.000; 435/235.100; 436/501.000; 436/528.000; 436/529.000; 436/530.000; 436/531.000; 436/546.000; 436/800.000; 436/809.000	
	ECLA	C12Q001/68B2D+563/107+527/125; G01N033/50D; G01N033/542	<--
US 6214563	NCL	435/007.100; 422/082.050; 422/099.000; 427/102.000; 427/157.000; 427/213.340; 435/005.000; 435/006.000; 435/007.200; 435/007.720; 435/007.920; 435/091.100; 435/230.000; 436/501.000; 436/528.000; 436/529.000; 436/530.000; 436/531.000; 436/546.000; 436/800.000; 436/809.000	
	ECLA	C12Q001/34; C12Q001/68B2D+563/107+527/125; G01N033/50D; G01N033/542	<--
US 6221612	NCL	435/007.100; 422/082.050; 422/099.000; 427/102.000; 427/157.000; 427/213.340; 435/005.000; 435/006.000; 435/007.200; 435/007.210; 435/007.500; 435/091.100; 435/230.000; 436/501.000; 436/528.000; 436/529.000; 436/530.000; 436/531.000; 436/546.000; 436/800.000; 436/809.000	
	ECLA	C12Q001/68B2D+563/107+527/125; G01N033/50D; G01N033/542; G01N033/58D	<--
US 2001006820	NCL	436/172.000	
	ECLA	C12Q001/68B2D+563/107+527/125; G01N033/50D; G01N033/542; G01N033/58D	<--

AB The present invention provides a method for reducing undesirable light emission from a sample using at least one photon producing agent and at least one photon reducing agent (e.g. dye-based photon reducing agents). The present invention further provides a method for reducing undesirable light emission from a sample (e.g., a biochem. or cellular sample) with at least one photon producing agent and at least one collisional quencher. The present invention also provides a method for reducing undesirable light emission from a sample (e.g., a biochem. or cellular sample) with at least one photon producing agent and at least one quencher, such as an electronic quencher. The present invention further provides a method of determining bound and free analyte in a sample using at least one photon reducing agent. The present invention also provides a method of screening test chems. in fluorescent assays using photon reducing agents. The present invention also provides compns. and kits for practicing these methods.

ST photon reducing agent fluorescence assay; quencher fluorescence fluorometry; cell based assay fluorometry dye quencher

IT Cytometry
(FACS (fluorescence-activated cell sorting); photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Inks
(Higgins, as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Photon
(agent producing, in membrane compartment; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Toxicology
(anal.; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Dyes
(as photon reducing agents; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Analytical apparatus
(biochem., for identifying chems. with biol. activity; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Analysis
(biochem.; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT **Fluorescence quenching**
(collisional; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Membrane, biological
(compartment containing photon producing agents; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Transcription, genetic
(dye-based photon reducing agents in relation to; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Resonant energy transfer
(fluorescent; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Animal cell
(mammalian; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT pH
(not indicator dye for; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Cell
Cytotoxicity
Drug screening
Fluorescence quenching
Fluorometry
Microtiter plates
Particles

Pharmaceutical analysis
Test kits
(photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT G protein-coupled receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Optical absorption
(quenchers; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT Solutions
(short path length and reduction of fluorescence of; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 846-70-8, Naphthol Yellow
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(Naphthol Yellow, as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 100458-96-6
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(Schilling Red, as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 328946-36-7, Tararaf
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(Tararaf, as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 9073-60-3, β-Lactamase
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(as photon producing agent in mammalian cell; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 72-48-0, Alizarin Red 115-39-9, Bromophenol Blue 1667-99-8 3567-69-9, Chromotrope FB 4197-07-3, Chromotrope 2R 4430-20-0, Chlorophenol Red 8004-92-0, Quinoline Yellow 16423-68-0, Erythrosin
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(as photon reducing agent for cell-based assays, cytotoxicity in relation to; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 72709-78-5, Patent Blue
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 143-74-8, Phenol red 1934-21-0, Tartrazine 3244-88-0 6360-07-2, Acid Red 37
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)

(as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 72-57-1, Trypan Blue 117-96-4, Diatrizoic acid 4097-89-6, Tris (2-aminoethyl) amine 7718-54-9, Nickel (II) chloride, analysis 7758-98-7, Copper (II) sulfate, analysis 13746-66-2, Potassium ferricyanide 13943-58-3, Potassium ferrocyanide
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 12167-45-2
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 183736-69-8, CCF 2AM
RL: ARU (Analytical role, unclassified); PRP (Properties); ANST (Analytical study)
(photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 67-56-1, Methanol, miscellaneous
RL: MSC (Miscellaneous)
(reduction of solution fluorescence not associated with stacking in relation to; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

IT 81-88-9, Rhodamine B 2321-07-5, Fluorescein 183736-74-5
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(reduction of solution fluorescence of; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

RE.CNT 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD

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(2) Anon; EP 0157197 1985 HCAPLUS
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(5) Anon; WO 9313423 1993 HCAPLUS
(6) Anon; WO 9623810 1996 HCAPLUS
(7) Anon; WO 9630540 1996 HCAPLUS
(8) Anon; WO 9641166 1996 HCAPLUS
(9) Anon; WO 9728261 1997 HCAPLUS
(10) Anon; WO 9813353 1998 HCAPLUS
(11) Anon; WO 9855231 1998 HCAPLUS
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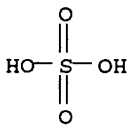
IT **7758-98-7**, Copper (II) sulfate, analysis
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(as photon reducing agent to reduce solution fluorescence; photon reducing agents and compns. for reducing undesirable light emission in fluorescence assays)

RN 7758-98-7 HCAPLUS

CN Sulfuric acid copper(2+) salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Cu(II)

L59 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **2001:165934** HCAPLUS
DN 134:204738
ED Entered STN: 09 Mar 2001
TI Quenchers for fluorescence assays to reduce undesirable light emission

IN Knapp, Tom; Zlokarnik, Gregor; Negulescu, Paul; Tsien, Roger Y.; Rink, Tim
PA Aurora Biosciences Corporation, USA; Invitrogen Corp.
SO Eur. Pat. Appl., 50 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G01N033-542
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 1, 41, 63, 73
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 1081495	A1	20010307	EP 1999-117221	19990901	<--
	EP 1081495	B1	20040310			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
	AT 261583	E	20040315	AT 1999-117221	19990901	<--
	PT 1081495	T	20040630	PT 1999-117221	19990901	<--
	ES 2214781	T3	20040916	ES 1999-117221	19990901	<--
PRAI	EP 1999-117221	A	19990901	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
EP 1081495	ICM	G01N033-542	
EP 1081495	ECLA	G01N033/542	<--

AB The present invention provides a method for reducing undesirable light emission from a sample using at least one photon producing agent and at least one photon reducing agent (e.g. dye-based photon reducing agents). The present invention further provides a method for reducing undesirable light emission from a sample (e.g., a biochem. or cellular sample) with at least one photon producing agent and at least one collisional quencher. The present invention also provides a method for reducing undesirable light emission from a sample (e.g., a biochem. or cellular sample) with at least one photon producing agent and at least one quencher, such as an electronic quencher. The present invention also provides a system and method of screening test chems. in fluorescent assays using photon reducing agents. The present invention also provides compns., pharmaceutical compns., and kits for practicing these methods.

ST fluorescence quencher fluorometry; cell assay fluorometry dye quencher
IT Fluorescent substances
((fluorogenic) enzyme substrates; quenchers for fluorescence assays to reduce undesirable light emission)
IT Cytometry
(FACS (fluorescence-activated cell sorting); quenchers for fluorescence assays to reduce undesirable light emission)
IT Inks
(Higgins, as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)
IT Photon
(agent producing, in membrane compartment; quenchers for fluorescence assays to reduce undesirable light emission)
IT Toxicology
(anal.; quenchers for fluorescence assays to reduce undesirable light emission)
IT Enzymes, biological studies
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(as photon producing agents in mammalian cell; quenchers for fluorescence assays to reduce undesirable light emission)
IT Azo dyes
Dyes
(as photon reducing agents; quenchers for fluorescence assays to reduce undesirable light emission)
IT Analytical apparatus

(automated, for identifying chems. with biol. activity; quenchers for fluorescence assays to reduce undesirable light emission)
IT Analytical apparatus
(biochem., for identifying chems. with biol. activity; quenchers for fluorescence assays to reduce undesirable light emission)
IT Analysis
(biochem.; quenchers for fluorescence assays to reduce undesirable light emission)
IT Electric potential
(biol., detection across membrane; quenchers for fluorescence assays to reduce undesirable light emission)
IT Chemistry
(chemical complexes, dark complexes; quenchers for fluorescence assays to reduce undesirable light emission)
IT **Fluorescence quenching**
(collisional; quenchers for fluorescence assays to reduce undesirable light emission)
IT Membrane, biological
(compartment containing photon producing agents; quenchers for fluorescence assays to reduce undesirable light emission)
IT Ions
(detection inside membrane compartment; quenchers for fluorescence assays to reduce undesirable light emission)
IT Transcription, genetic
(dye-based photon reducing agents in relation to; quenchers for fluorescence assays to reduce undesirable light emission)
IT **Fluorometry**
(**epifluorescence**; **quenchers** for **fluorescence** assays to reduce undesirable light emission)
IT Resonant energy transfer
(fluorescent; quenchers for fluorescence assays to reduce undesirable light emission)
IT Proteins, specific or class
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescent; quenchers for fluorescence assays to reduce undesirable light emission)
IT Indicators
(for intracellular ions; quenchers for fluorescence assays to reduce undesirable light emission)
IT Proteins, specific or class
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(green fluorescent, modified; quenchers for fluorescence assays to reduce undesirable light emission)
IT Animal cell
Animal tissue culture
(mammalian; quenchers for fluorescence assays to reduce undesirable light emission)
IT pH
(not indicator dye for; quenchers for fluorescence assays to reduce undesirable light emission)
IT Cell
Cytotoxicity
Data processing
Drug delivery systems
Drug screening
Fluorescence quenching
Fluorometry
Microtiter plates
Particles
Partition
Pharmaceutical analysis
Test kits
(**quenchers** for **fluorescence** assays to reduce undesirable light emission)
IT Reagents
RL: ARG (Analytical reagent use); DEV (Device component use); ANST

(Analytical study); USES (Uses)
(quenchers for fluorescence assays to reduce undesirable light emission)

IT Optical absorption
(quenchers; quenchers for fluorescence assays to reduce undesirable light emission)

IT Interference
(sample containing agent causing; quenchers for fluorescence assays to reduce undesirable light emission)

IT Solutions
(short path length and reduction of fluorescence of; quenchers for fluorescence assays to reduce undesirable light emission)

IT Sensors
(voltage; quenchers for fluorescence assays to reduce undesirable light emission)

IT 846-70-8, Naphthol Yellow
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(Naphthol Yellow, as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)

IT 100458-96-6, Schilling Red
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(Schilling Red, as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)

IT 328946-36-7, Tararaf
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(Tararaf, as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)

IT 9073-60-3, β-Lactamase
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(as photon producing agent in mammalian cell; quenchers for fluorescence assays to reduce undesirable light emission)

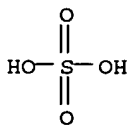
IT 72-48-0, Alizarin Red 115-39-9, Bromophenol Blue 1667-99-8 3567-69-9, Chromotrope FB 4197-07-3, Chromotrope 2R 4430-20-0, Chlorophenol Red 8004-92-0, Quinoline Yellow 16423-68-0, Erythrosin
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(as photon reducing agent for cell-based assays, cytotoxicity in relation to; quenchers for fluorescence assays to reduce undesirable light emission)

IT 72709-78-5, Patent Blue
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)

IT 143-74-8, Phenol red 1934-21-0, Tartrazine 3244-88-0 6360-07-2, Acid Red 37
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)

IT 72-57-1, Trypan Blue 117-96-4, Diatrizoic acid 4097-89-6, Tris (2-aminoethyl) amine 7718-54-9, Nickel (II) chloride, analysis 7758-98-7, Copper (II) sulfate, analysis 13746-66-2, Potassium

ferricyanide 13943-58-3, Potassium ferrocyanide
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)
IT 183736-74-5D, derivs.
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(phenol red reduction of solution fluorescence of; quenchers for fluorescence assays to reduce undesirable light emission)
IT 9013-79-0, Esterase
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(photon producing agent from substrate for; quenchers for fluorescence assays to reduce undesirable light emission)
IT 183736-69-8, CCF 2AM
RL: ARU (Analytical role, unclassified); PRP (Properties); ANST (Analytical study)
(quenchers for fluorescence assays to reduce undesirable light emission)
IT 67-56-1, Methanol, miscellaneous
RL: MSC (Miscellaneous)
(reduction of solution fluorescence not associated with stacking in relation to; quenchers for fluorescence assays to reduce undesirable light emission)
IT 81-88-9, Rhodamine B 2321-07-5, Fluorescein
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(reduction of solution fluorescence of; quenchers for fluorescence assays to reduce undesirable light emission)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Akong, M; US 5670113 A 1997 HCAPLUS
(2) Aurora Biosciences Corp; WO 9855231 A 1998 HCAPLUS
(3) Aurora Biosciences Corp; WO 9942608 A 1999 HCAPLUS
(4) Aurora Biosciences Corp; EP 0973040 A 2000 HCAPLUS
(5) Ikeda, K; US 5434088 A 1995 HCAPLUS
(6) Salk Inst Biotech Ind; WO 9313423 A 1993 HCAPLUS
(7) Tsien, R; US 5661035 A 1997 HCAPLUS
(8) Unilever Plc; EP 0270206 A 1988 HCAPLUS
(9) Wagner, D; US 5017473 A 1991 HCAPLUS
IT 7758-98-7, Copper (II) sulfate, analysis
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(as photon reducing agent to reduce solution fluorescence; quenchers for fluorescence assays to reduce undesirable light emission)
RN 7758-98-7 HCAPLUS
CN Sulfuric acid copper(2+) salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Cu(II)

L59 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:595492 HCAPLUS
DN 131:223474
ED Entered STN: 21 Sep 1999
TI High-throughput screening assays for modulators of nucleic acid

topoisomerases
IN Lynch, Anthony Simon; Matthew, Binoj Joseph
PA Tularik Inc., USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-53
ICS G01N033-573; C12N009-90; C12Q001-533
CC 1-1 (Pharmacology)
Section cross-reference(s): 3
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9946595	A1	19990916	WO 1999-US5209	19990308	<--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	US 5998152	A	19991207	US 1998-37154	19980309	<--
	AU 9929964	A1	19990927	AU 1999-29964	19990308	<--
	US 6197527	B1	20010306	US 1999-351662	19990713	<--
PRAI	US 1998-37154	A	19980309	<--		
	WO 1999-US5209	W	19990308	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
WO 9946595	ICM	G01N033-53	
	ICS	G01N033-573; C12N009-90; C12Q001-533	
WO 9946595	ECLA	C12N009/90; G01N033/573	<--
US 5998152	NCL	435/007.100; 435/233.000	
	ECLA	C12N009/90; G01N033/573	<--
US 6197527	NCL	435/007.100; 435/233.000	
	ECLA	G01N033/573	<--

AB This invention provides novel assays for topoisomerase activity and for identifying topoisomerase inhibitors. The assays include both solid-phase and liquid-phase methods that are amenable to high-throughput screening methods. The assays are readily adaptable to numerous types of topoisomerase, and are capable of identifying novel classes of topoisomerase activity modulators.
ST topoisomerase modulator screening
IT Proteins, specific or class
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(A, conjugates, with peroxidase; topoisomerase modulator high-throughput screening assay)
IT Quaternary structure
(DNA triplex; topoisomerase modulator high-throughput screening assay)
IT Proteins, specific or class
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(DNA-binding; topoisomerase modulator high-throughput screening assay)
IT Supercoiled structure
(DNA; topoisomerase modulator high-throughput screening assay)
IT Immunoglobulins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(G, peroxidase conjugates; topoisomerase modulator high-throughput screening assay)
IT Immunoglobulins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(G1, monoclonal; topoisomerase modulator high-throughput screening assay)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-myc, epitope; topoisomerase modulator high-throughput screening assay)
IT Plasmids
(circular plasmid DNA; topoisomerase modulator high-throughput screening assay)
IT DNA
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(circular plasmid DNA; topoisomerase modulator high-throughput screening assay)
IT Nucleic acids
Polynucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(conjugates, with tag mol.; topoisomerase modulator high-throughput screening assay)
IT Coordination compounds
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cryptates, europium; topoisomerase modulator high-throughput screening assay)
IT **Immunoassay**
(enzyme; topoisomerase modulator high-throughput screening assay)
IT Dyes
Fluorescent substances
(label; topoisomerase modulator high-throughput screening assay)
IT Enzymes, biological studies
Radionuclides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(label; topoisomerase modulator high-throughput screening assay)
IT Nucleosides, reactions
Nucleotides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactive hydroxyl group of; topoisomerase modulator high-throughput screening assay)
IT Chelates
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(terbium; topoisomerase modulator high-throughput screening assay)
IT Denaturants
Drug screening
Epitopes
Fluorescence quenching
Fluorometry
Immobilization, biochemical
Molecular association
(topoisomerase modulator high-throughput screening assay)
IT Allophycocyanins
Antibodies
Ligands
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topoisomerase modulator high-throughput screening assay)
IT Bacteria (Eubacteria)
Escherichia coli
Eukaryote (Eukaryotae)
Fungi
Virus
(topoisomerase of; topoisomerase modulator high-throughput screening assay)
IT 149371-03-9, Topoisomerase III

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(and IIIβ; topoisomerase modulator high-throughput screening assay)

IT 142805-56-9, Topoisomerase II
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(and IIβ; topoisomerase modulator high-throughput screening assay)

IT 70458-96-7, Norfloxacin 80449-01-0, Topoisomerase 82419-36-1, Ofloxacin 143180-75-0 144941-31-1, Topoisomerase IV
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(topoisomerase modulator high-throughput screening assay)

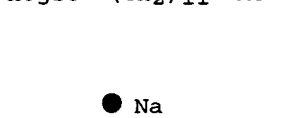
IT 58-85-5D, Biotin, nucleic acid conjugates **151-21-3**, Sodium dodecyl sulfate, biological studies 7440-27-9D, Terbium, chelates, biological studies 7440-53-1D, Europium, cryptates, biological studies 9003-99-0D, Peroxidase, IgG conjugates 9013-20-1, Streptavidin 107347-53-5, Tetramethylrhodamine isothiocyanate 157885-16-0, Neutravidin 244008-10-4D, 3'-biotin derivative 244008-11-5
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topoisomerase modulator high-throughput screening assay)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Andrea; Mol Pharmacol 1991, V40(4), P495 HCAPLUS
(2) Lerner; Analytical Biochemistry 1996, V240(2), P185 HCAPLUS
(3) Lerner; J Biomol Screening 1996, V1(3), P135 HCAPLUS
(4) Miyahara; Food Factors Cancer Prev [Int Conf] 1997, P182 HCAPLUS
(5) Muller; Nucleic Acids Res 1989, V17(22), P9499 HCAPLUS
(6) Shin; Teratogenesis Carcinogenesis And Mutagenesus 1990, V10(1), P41 HCAPLUS
(7) Silverman; Current Opinion in Chemical Biology 1998, V2(3), P397 HCAPLUS
(8) Sittampalam; Current Opinion in Chemical Biology 1997, V1(3), P384 HCAPLUS

IT **151-21-3**, Sodium dodecyl sulfate, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topoisomerase modulator high-throughput screening assay)

RN 151-21-3 HCAPLUS
CN Sulfuric acid monododecyl ester sodium salt (8CI, 9CI) (CA INDEX NAME)



$HO_3SO-(CH_2)_{11}-Me$

● Na

L59 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:424420 HCAPLUS
DN 127:134827
ED Entered STN: 09 Jul 1997
TI The development of optical chemical sensors for the detection of volatile compounds from spoiled hams
AU Choi, Ming Fat; Hawkins, Peter
CS Faculty of Applied Sciences, University of the West of England, Coldharbour Lane, Frenchay, Bristol, BS16 1QY, UK
SO Sensors and Actuators, B: Chemical (1997), B39(1-3), 390-394
CODEN: SABCEB; ISSN: 0925-4005
PB Elsevier
DT Journal
LA English
CC 17-1 (Food and Feed Chemistry)
AB An optode membrane fabricated by immobilizing tetraoctylammonium fluorescein mercuric acetate (TOAFMA), tetraoctylammonium hydroxide and

tri-Bu phosphate into a polymeric support (Et cellulose) to detect certain sulfur-containing compds. in the vapors from the hams. The fluorescence of the TOAFMA is irreversibly quenched by the sulfur-containing compds. in the vapors from the hams. Over a fixed time interval, the vapor from a bad ham causes a greater fluorescence quenching effect than that from a good ham and the longer the exposure time, the greater is the response of the membranes to the ham vapors. The compound di-Me disulfide (DMDS) was used to investigate the response characteristics of the optode membranes. A flow rig for producing mixts. with accurately known concns. of DMDS in nitrogen gas is also described. This system could be easily adapted to work with any volatile liquid

ST optode membrane fluorescence ham off flavor; fluorescence quenching sulfide optode ham flavor; fluorescein mercuric acetate membrane optode

IT Optrodes
(for detection of volatile compds. from spoiled hams)

IT Meat
(ham; optical chemical sensors for detection of volatile compds. from spoiled hams)

IT Flavor
(off-flavor; optical chemical sensors for detection of volatile compds. from spoiled hams)

IT **Fluorescence quenching**
Membranes, nonbiological
(optical chemical sensors for detection of volatile compds. from spoiled hams)

IT **Organic compounds, analysis**
RL: ANT (Analyte); ANST (Analytical study)
(**sulfur**-containing; optical chemical sensors for detection of volatile compds. from spoiled hams)

IT 624-92-0, Dimethyl disulfide
RL: ANT (Analyte); ANST (Analytical study)
(optical chemical sensors for detection of volatile compds. from spoiled hams)

IT 126-73-8, Tributyl phosphate, analysis 9004-57-3, Ethyl cellulose 17756-58-0, Tetraoctylammonium hydroxide 190719-32-5
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(optical chemical sensors for detection of volatile compds. from spoiled hams)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Giolitti, G; J Appl Bact 1971, V34, P51 HCAPLUS
(2) Greenwood, N; Chemistry of the Elements 1984, P1416
(3) Karush, F; Anal Biochem 1964, V9, P100 HCAPLUS
(4) Namiesnik, J; J Chromatogr 1984, V300, P79 HCAPLUS
(5) Parker, A; Chemical Reviews 1959, V59, P583 HCAPLUS
(6) Weigl, B; Anal Chim Acta 1995, V302, P249 HCAPLUS

L59 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:403598 HCAPLUS
DN 117:3598
ED Entered STN: 11 Jul 1992
TI Antioxidative activity of amino acids and sulfur-containing compounds to superoxide: measurement by quenching the chemiluminescence of a Cypridina luciferin analog
AU Suzuki, Nobutaka; Kochi, Masayuki; Wada, Naohisa; Mashiko, Shinro; Nomoto, Tateo; Yoda, Binkoh
CS Shimonoseki Univ. Fish., Shimonoseki, 759-65, Japan
SO Bioscience, Biotechnology, and Biochemistry (1992), 56(3), 409-11
CODEN: BBBIEJ; ISSN: 0916-8451
DT Journal
LA English
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6
AB Reaction rate consts. between superoxide (O2-) and natural anti-oxidants, amino acids and some related sulfur-containing compds. were determined by quenching

the chemiluminescence of a Cypridina luciferin analog, 2-methyl-6-phenyl-3,7-dihydroimidazo[1,2-a]pyrazin-3-one (CLA) in pH 7.0 buffer solns. at 25° as described in a previous report. The results are discussed in comparison with the literature data. The present method can be applied to measured antioxidative activity of even a fairly unstable sample.

ST methylphenyldihydroimidazopyrazinone chemiluminescence superoxide quenching amino acid; luciferin analog Cypridina chemiluminescence superoxide quenching

IT Antioxidants
(amino acids and sulfur-containing compds. as, to superoxide, quenching of chemiluminescence of Cypridina luciferin analog as measure of)

IT Cypridina
(methylphenyldihydroimidazopyrazinone of, quenching of chemiluminescence of, measurement of antioxidative activity of amino acids and sulfur-containing compds. in relation to)

IT Amino acids, properties
RL: ANST (Analytical study)
(superoxide antioxidative activity of, chemiluminescence quenching of luciferin analog as measure of)

IT **Luminescence quenching**
(chemi-, of methylphenyldihydroimidazopyrazinone, of Cypridina, as measure of antioxidative activity of amino acids and sulfur-containing compds. to superoxide)

IT **Organic compounds, properties**
RL: ANST (Analytical study)
(**sulfur**-containing, superoxide antioxidative activity of, chemiluminescence quenching of luciferin analog as measure of)

IT 11062-77-4, Superoxide
RL: ANST (Analytical study)
(antioxidative activity of amino acids and sulfur-containing compds. to, quenching of chemiluminescence of luciferin analog as measure of)

IT 19953-58-3
RL: ANST (Analytical study)
(chemiluminescence quenching of, of Cypridina, antioxidative activity of amino acids and sulfur-containing compds. to superoxide measured by)

IT 51-35-4 52-66-4 52-90-4, L-Cysteine, properties 56-40-6, Glycine, properties 56-41-7, Alanine, properties 56-45-1, Serine, properties 56-84-8, Aspartic acid, properties 56-85-9, Glutamine, properties 56-86-0, Glutamic acid, properties 56-87-1, Lysine, properties 56-89-3, L-Cystine, properties 60-18-4, Tyrosine, properties 61-90-5, Leucine, properties 63-68-3, L-Methionine, properties 63-91-2, L-Phenylalanine, properties 70-18-8, Glutathione, properties 70-47-3, Asparagine, properties 71-00-1, Histidine, properties 72-18-4, Valine, properties 72-19-5, Threonine, properties 73-22-3, Tryptophan, properties 73-32-5, Isoleucine, properties 74-79-3, Arginine, properties 107-35-7 147-85-3, Proline, properties 454-29-5, DL-Homocysteine 498-40-8, L-Cysteic acid 20986-22-5, Propiothetin 27025-41-8, Oxidized glutathione
RL: ANST (Analytical study)
(superoxide antioxidative activity of, chemiluminescence quenching of luciferin analog as measure of)

L59 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1985:434354** HCAPLUS
DN 103:34354
ED Entered STN: 10 Aug 1985
TI Solvent perturbation fluorescence immunoassay technique
AU Halfman, Clarke J.; Wong, Franklin C. L.; Jay, Dennis W.
CS Chicago Med. Sch., Univ. Health Sciences, North Chicago, IL, 60064, USA
SO Analytical Chemistry (1985), 57(9), 1928-30
CODEN: ANCHAM; ISSN: 0003-2700
DT Journal
LA English
CC 9-2 (Biochemical Methods)
Section cross-reference(s): 1, 15

AB The preferential quenching by a detergent of the emission intensity of a free fluorescent-labeled antigen without influencing the emission intensity of labeled antigen bound to the corresponding antibody was used to develop the title homogeneous fluorescence immunoassay. The method is illustrated by the determination of gentamicin in human blood serum by using fluorescein-labeled gentamicin, antigentamicin antiserum, and SDS as detergent. Quenching of the emission of free fluorescein-labeled gentamicin by SDS is due to the association of fluorescein-labeled gentamicin with detergent micelles.

ST solvent perturbation fluorescence immunoassay; serum gentamicin detn; SDS fluorescence immunoassay; detergent fluorescence immunoassay; antigen detn solvent perturbation immunoassay

IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by solvent perturbation fluorescence immunoassay)

IT Blood analysis
(gentamicin determination in, of humans by solvent perturbation fluorescence immunoassay)

IT Detergents
(in solvent perturbation fluorescence immunoassay)

IT **Fluorescence quenching**
(of fluorescent-labeled antigens, in solvent perturbation fluorescence immunoassay)

IT **Immunochemical analysis**
(**fluorescence immunoassay**, solvent perturbation, detergents in)

IT 1403-66-3
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in human blood serum by solvent perturbation fluorescence immunoassay)

IT 96503-28-5
RL: PROC (Process)
(fluorescence quenching of, by SDS)

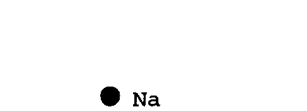
IT 2321-07-5
RL: ANST (Analytical study)
(in solvent perturbation fluorescence immunoassay)

IT **151-21-3**, properties
RL: PRP (Properties)
(in solvent perturbation fluorescence immunoassay)

IT **151-21-3**, properties
RL: PRP (Properties)
(in solvent perturbation fluorescence immunoassay)

RN 151-21-3 HCAPLUS

CN Sulfuric acid monododecyl ester sodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

L59 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1971:83469 HCAPLUS

DN 74:83469

ED Entered STN: 12 May 1984

TI Interaction between tyrosine and divalent sulfur in fluorescence quenching and in the photochemistry of ribonuclease

AU Arian, Shulamit; Benjamini, Mira; Feitelson, Jehuda; Stein, Gabriel

CS Dep. Phys. Chem., Hebrew Univ., Jerusalem, Israel

SO Photochemistry and Photobiology (1970), 12(6), 481-7
CODEN: PHCBAP; ISSN: 0031-8655

DT Journal

LA English

CC 3 (Enzymes)
AB The absorption and fluorescence spectra, enzyme activity, and SH content of aqueous solns. of RNase were measured after exposure to uv (254 and 284 mμ). At 284 mμ, at which wavelength energy is absorbed by tyrosine moieties, O2 inhibits photoinactivation and formation of H2S, but this effect is much less at 254 or 313 mμ. Disulfide compds. such as dithiodiglycolic acid quench tyrosine fluorescence very effectively. Excited tyrosine moieties are quenched by electron transfer to adjacent divalent sulfur.
ST tyrosine sulfur RNase; sulfur tyrosine RNase; RNase tyrosine sulfur; fluorometry RNase sulfhydryls; sulfhydryls fluorometry RNase
IT **Fluorescence**
(of ribonuclease tyrosine, divalent **sulfur** in **quenching** of)
IT Mercapto group
(of ribonuclease, phytochemistry in relation to)
IT 60-18-4, biological studies
RL: BIOL (Biological study)
(of ribonuclease, photochemistry in relation to)
IT 9001-99-4, Nucleases, ribo-
(photochemistry of, divalent sulfur-tyrosine interactions in)

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=> b biosis
FILE 'BIOSIS' ENTERED AT 10:31:05 ON 26 MAY 2005
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 25 May 2005 (20050525/ED)

FILE RELOADED: 19 October 2003.

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L67  ANSWER 1 OF 2  BIOSIS  COPYRIGHT (c) 2005 The Thomson Corporation  on STN
AN   2002:106717  BIOSIS
DN   PREV200200106717
TI   Quenching reagents and assays for enzyme-mediated luminescence.
AU   Sherf, B. A. [Inventor]; Wood, K. V [Inventor]; Schenborn, E. T.
     [Inventor]
CS   Waunakee, Wis., USA
     ASSIGNEE: PROMEGA CORPORATION
PI   US 5744320 19980428
SO   Official Gazette of the United States Patent and Trademark Office Patents,
     (April 28, 1998) Vol. 1209, No. 4, pp. 3234. print.
     CODEN: OGUPE7. ISSN: 0098-1133.
DT   Patent
LA   English
ED   Entered STN: 24 Jan 2002
     Last Updated on STN: 26 Feb 2002
NCL  435008000
CC   Biochemistry studies - General   10060
     Enzymes - General and comparative studies: coenzymes   10802
     Methods - Laboratory methods   01004
     Radiation biology - General   06502
     General biology - Miscellaneous   00532
IT   Major Concepts
        Biochemistry and Molecular Biophysics; Enzymology (Biochemistry and
        Molecular Biophysics); General Life Studies; Methods and Techniques;
        Radiation Biology
IT   Miscellaneous Descriptors
        ANALYTICAL TECHNIQUES; BIOTECHNOLOGY

L67  ANSWER 2 OF 2  BIOSIS  COPYRIGHT (c) 2005 The Thomson Corporation  on STN
AN   1990:207396  BIOSIS
DN   PREV199038096019; BR38:96019
TI   MEASUREMENT OF COUNTING EFFICIENCIES WITH SOLID SCINTILLATORS A RECEPTOR
     ASSAY EXAMPLE.
AU   HAWKINS E F [Reprint author]
CS   DONALD L HORROCKS NUCLEAR APPLICATIONS LAB, SCIENTIFIC INSTRUMENTS DIV,
     BECKMAN INSTRUMENTS INC, FULLERTON, CALIF, USA
SO   American Biotechnology Laboratory, (1990) Vol. 8, No. 3A, pp. 14.
     CODEN: ABLAEY. ISSN: 0749-3223.
DT   Article
FS   BR
LA   ENGLISH
ED   Entered STN: 29 Apr 1990
     Last Updated on STN: 29 Apr 1990
CC   Methods - Laboratory apparatus   01006
     Microscopy - Cytology and cytochemistry   01054
     Cytology - General   02502
     Radiation biology - Radiation and isotope techniques   06504
     Biochemistry studies - General   10060
IT   Major Concepts
        Cell Biology; Equipment, Apparatus, Devices and Instrumentation;
        Radiology (Medical Sciences)
```

IT Miscellaneous Descriptors
WHOLE CELL RECEPTOR ASSAY **QUENCH** CORRECTION BIOLOGICAL
INSTRUMENTATION METHODS

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